BARRIERS TO HEALTH CARE IN HOMELESS INDIVIDUALS

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ABSTRACT

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When it comes to health care access, homeless individuals in America are underserved. Individuals experiencing homelessness make up a heterogeneous population, comprising those who are both chronically and temporarily homeless. Homeless individuals face several common barriers to gaining access to health care services, which can be classified under four broad categories: bureaucratic, personal, programmatic, and financial. These barriers often prevent homeless persons from seeking or receiving health care until immediate health care intervention is necessary. Furthermore, the need for health care is greater in the homeless population, as rates of chronic disease, acute illness, and mental illness are in some cases almost double those of housed persons. Due to this combination of poor health and limited access to affordable primary care, homeless patients may be forced to ignore their health needs, or may turn to emergency departments to receive care when there is no other clear option.

In the following thesis, I will investigate the relationships between the barriers to health care and health outcomes in America's homeless population on the national, state, and local level. To accomplish this, I will analyze both existing literature and primary data that I have collected through patient interviews at a student-run free clinic in Austin. Through this research, I hope to help provide a foundation upon which to design new resources and to improve existing resources that help the homeless gain access to health care in Austin.

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Introduction

Imagine, for a minute, that you're working three part-time jobs: the first as a receptionist at a salon on the weekends, the second as a fry cook at a Wendy's, the third as a waitress at nights. It's exhausting, but the long hours you work are enough to pay for a modest studio apartment. There's not much money left in your paycheck for groceries, but with your employee discount at the fast food place, you're able to sustain yourself on burgers and Frosties. In your mind, your situation is only temporary – after a few months of hard work, you'll surely be promoted to a managerial position, and then you won't be living dollar-to-dollar.

Then, one day, you get sick. You don't have health insurance, so you figure, eh, you can tough it out. But after a few days pass, you develop a fever. Your boss sends you home from work. After a couple of weeks pass and you're still bed-ridden, he calls to tell you to not bother returning. Then, you wake up one morning and find it difficult to breathe, so you finally give in and dial 911. After a few hours at the emergency department (ED) and a bunch of fancy, expensive-sounding tests, the doctor informs you that you have something called lupus. Can they cure you? No. It's chronic? Great. You head home a few days later with a prescription for a drug that you can't afford, and panic starts to set in. Then, bam: you get the hospital bill – it's almost as much as what you make in an entire year. A couple months go by, and the landlord has had enough. You get evicted.

Medical debt is the number one cause of personal bankruptcy in the United States today, contributing to over fifty percent of cases (Hackney, Friesner, & Johnson, 2016). Even for those who do have health insurance, high deductibles, co-payments, exclusions from coverage, and

loopholes can financially ruin low- and middle-income individuals and families in America. Moreover, people with medical debt are more likely to forego further health care, failing to appear for regular check-ups and fill needed prescriptions (Pollitz, Cox, Lucia, & Keith, 2014). Rather than fixing the problem of medical debt, neglecting to seek out health care can instead exacerbate existing medical problems, until a condition that could have been prevented through primary care becomes one that requires expensive measures such as hospitalization. Many Americans who are unable to pay off their medical debt lose their retirement funds, have their utilities shut off, and their assets seized; some lose their homes.

Medical debt is just one of several factors that might push an individual into homelessness. Other risk factors include poverty, adverse early childhood experiences, mental health and substance abuse problems, association with the criminal justice system, and personal history of violence, in addition to structural factors such as absence of low-cost housing, lack of income support, low minimum wage, and lack of employment opportunities for low-skilled workers (Fazel, Geddes, & Kushel, 2014). However, regardless of *how* a person becomes homeless, poor conditions associated with homelessness place that individual at a higher risk of suffering health consequences than stably housed individuals.

Through this thesis, I aim to examine the relationship between homelessness and health status in America. A number of complex factors faced by homeless persons, such as malnutrition, social isolation, and exposure to the elements, make these individuals more susceptible to health problems than the general population; yet attempts to resolve these health problems by seeking out health care may further exacerbate their situation by increasing their medical debt, in some cases (Hayashi, 2016). Because of this relationship, I argue that

identifying the barriers to health care that homeless persons face on a day-to-day basis is a crucial step in improving health care for individuals experiencing homelessness.

The first part of the thesis is a literature review to describe some of the unique problems that impact health care in the United States, to define homelessness and to describe health disparities and barriers to health care faced by homeless individuals. Next, the strengths and weaknesses of national, state, and local services and resources currently available to homeless individuals will be described. Third, a case study examining barriers to health care in patients at an Austin student-run free clinic is presented. The final section will offer potential solutions that could alleviate barriers to health care in the future. Implications of potential health policy changes that might be made under the Trump administration will also be discussed.

PART I. BACKGROUND & LITERATURE REVIEW

Chapter 1. The State of Health Care in the United States Today

The United States health care system is unique in comparison with the rest of the developed world. While most European countries adopted a universalized health care system in the 1800s, the United States has only recently begun to explore an affordable health care program for all. Even under the Patient Protection and Affordable Care Act (ACA), which is predicted to be repealed under the Trump administration, nearly 30 million people in the United States remain uninsured, and therefore have limited access to health care (Kaiser Family Foundation, 2015).

The Medicaid Coverage Gap

Today, a gap exists in the United States population for patients who are under the age of 65 (not Medicare eligible), who earn too much per year to be eligible for Medicaid, and do not earn enough to afford private health insurance. Texas has the highest rate of uninsured individuals across the United States, with 16 percent of the population, or 3,059,800 people, lacking insurance (Kaiser Family Foundation, 2015). Furthermore, even patients who do have insurance often struggle to access reliable and quality health care. For example, 70.5 million Americans are covered by Medicaid, yet these patients often have trouble finding a health care provider that accepts their coverage.

This difficulty in finding a provider may be attributed in part to the recent influx of people qualifying for Medicaid in addition to low reimbursement rates for physician services. To make it easier for patients to find health care providers that accept Medicaid, the ACA mandated

a federally funded $7.1 billion increase in physician reimbursement fees in 2013. These increases in Medicaid reimbursement rates varied from state to state, depending on how much each Medicaid agency was already paying within each state. One study conducted by the Urban Institute and University of Pennsylvania's Leonard Davis Institute of Health Economics revealed that patients with Medicaid found it easier overall to make appointments after the fee increase. This study showed that, in ten states (including Texas), appointment availability increased 7.7 percent for patients covered by Medicaid after the fee increase was implemented; at the same time, appointment availability remained unchanged in patients who were privately insured (Polsky et al., 2015). However, at the end of 2014, these fees fell once again. Furthermore, regardless of the benefits of this fee bump, Medicaid-insured patients in states with few Medicaid doctors must rely on community health centers or free clinics for health care (Renter, 2015). These studies indicate that, in addition to expanding Medicaid to serve more of the population, states must also incentivize physicians to make their services more accessible to patients with Medicaid coverage.

The Affordable Care Act

The ACA, signed into law by President Obama in 2010, aims to make health care more affordable for those without adequate coverage. Though this law has stirred up political debate due to factors such as rising premiums, the ACA has proven largely successful; six years after its enactment, the United States' uninsured population reached an all-time low, at just 9 percent (Kaiser Family Foundation, 2015). Despite this success, certain populations within the United States are left out of the ACA; namely, undocumented immigrants and those who are incarcerated (Obamacare Facts, 2017b). To address the needs of such underserved populations,

some cities offer locally organized health care safety-net systems which may include public hospitals, community health clinics, and physician networks (Hall, 2016, p. 20). While the ACA does not grant undocumented immigrants eligibility for public insurance programs, it does include additional funding for these health care safety-net systems, including $11 billion for Federally Qualified Health Centers (FQHCs) (Gusmano, 2012).

Many states have resisted certain facets of the ACA. For instance, under the ACA, Medicaid eligibility was expanded to individuals that had incomes up to 138 percent of the federal poverty level in participating states. As part of this Medicaid expansion, federal money was made available to states that chose to expand. However, nearly twenty states, including Texas, have chosen not to expand Medicaid, leaving 5 million Texans uninsured (Sommers, 2016). Republican elected officials in Texas, including Senator Charles Schwertner and Senator Lois Kolkhorst, have expressed skepticism that an expanded Medicaid program would even be able to make a dent in the costs of "uncompensated care" in hospitals (Walters, 2016). However, according to the Center on Budget and Policy Priorities, states that opted for Medicaid expansion in 2014 saw a steep decrease in the amount of uncompensated care, as hospitals are treating fewer uninsured individuals; furthermore, evidence has shown that states themselves have accrued large savings as a result of Medicaid expansion, which are projected to increase over time (Cross-Call, 2015). Regardless of these savings, however, the future of the ACA along with Medicaid expansion remains uncertain under the new Trump administration.

Health Care Access Under the Trump Administration

On March 6, 2017, House Republicans released an initial draft of The American Health Care Act (AHCA), which was intended to serve as a replacement for the ACA. Rather than basing tax credits on income, as was done under the ACA, tax credits under the AHCA would instead be based on age. In addition, the AHCA would remove mandate penalties, meaning that individuals could choose whether or not to purchase health insurance without having to pay a fine. These two features of the AHCA would likely result in fewer healthy people signing up for health insurance overall, which would in turn result in higher health insurance premiums. Shortly after the draft of the AHCA was released, the Congressional Budget Office estimated that, under the AHCA, 14 million more people would be uninsured by 2018; 21 million more people would be uninsured by 2020; and 24 million more people would be uninsured by 2024 (Congressional Budget Office, 2017).

Though the bill was withdrawn on March 24, 2017, it is still likely that President Trump will continue efforts to repeal (or at least, unravel) the ACA. One of the biggest threats currently facing the ACA is a three-year lawsuit by the House of Representatives on subsidies supporting private plans sold through the ACA marketplace. This lawsuit, which has already gained a court victory, could potentially leave up to 12 million people uninsured even if the ACA is not fully repealed (Hancock, 2017).

Changes made to health insurance coverage in the United States on the federal level are likely to directly affect providers serving homeless individuals. According to the Kaiser Family Foundation, there have been significant gains in coverage among patients served by Health Care

for Homeless (HCH) projects following the implementation of the ACA in 2014, with states that opted for Medicaid expansion experiencing higher gains than states that did not. In fact, between 2012 (before expansion) and 2014 (after expansion), health insurance coverage within HCH clinics increased by 22 percent. In contrast, non-expansion states experienced only a 4 percent increase in health insurance coverage in HCH clinics (Warfield & Artiga, 2016). Therefore, potential cuts in federal funding to Medicaid in the future leave those served by programs such as HCH uncertain regarding whether or not their coverage will be sustained in the coming years.

Chapter 2. Homelessness: Definitions and Trends

The following chapter defines and describes homelessness in the United States and in Austin, Texas; explains causes of homelessness which include individual and structural factors; describes the intersectionality between homelessness and other marginalized groups; lists common barriers to health care that homeless individuals face; and reports health disparities between homeless and housed individuals.

Homelessness in the United States

A homeless person can be described as someone who lacks a fixed, regular nighttime residence. While some individuals are chronically homeless, many are simply temporarily homeless. A chronically homeless individual refers to an individual who has a disability and has been homeless continuously for at least one year, or who has had at least four episodes of homelessness which total to at least 12 months (Henry et al., 2016). Though homeless individuals are often subject to judgements based on stereotypes (such as the perception that the homeless are adults who are simply uninterested in permanent work, uneducated, and/or drug-

addicted), the homeless population is not limited to one specific group of people. According to the 2016 Annual Homeless Assessment Report (AHAR) to Congress, 60 percent of people experiencing homelessness in America were men, and 40 percent were women on a single night in January 2016. Twenty-two percent of all Americans experiencing homelessness were children under the age of 18; nine percent were between the ages of 18 and 24; and 69 percent were over 24 years of age. Thirty-nine percent were African American, while 48 percent were white. Furthermore, veterans account for just over nine percent of all homeless adults in the United States (Henry et al., 2016).

Homelessness in Austin, Texas

Though overall homelessness rates are declining nationally, some states and localities continue to face increases in homelessness (National Low Income Housing Coalition, 2015). Furthermore, while homelessness declined by three percent overall between 2015 and 2016, the number of homeless amongst unsheltered persons increased two percent (Henry et al., 2016). In Austin, homelessness has increased significantly in recent years, with a 20 percent rise in homelessness between 2015 and 2016 alone. According to the Current Needs and Gaps Report published by ECHO in 2016, the number of persons experiencing homelessness on a given day rose from 1,832 in 2015 to 2,197 in 2016; within this, the number of unsheltered homeless persons rose from 667 to 815 (ECHO, 2016).

A report published by ECHO presented data on several characteristics of Austin's homeless population, based on Coordinated Assessment surveys of 4,771 people administered throughout the month of January 2016. This data showed that, of these homeless individuals, 62

percent are male and 38 percent are female; 42 percent are African American, 31 percent are non-Hispanic white, 23 percent are Latino, and 4 percent are "other"; 40 percent are between the ages of 45 and 65, the largest age demographic; and 15 percent are veterans.

Causes of Homelessness: Individual and Structural Factors

The causes behind homelessness in America are complex, and typically involve a combination of individual and structural factors. Individual factors that may put someone at risk of becoming homeless include poverty, adverse early childhood experiences, mental health and substance abuse problems, association with the criminal justice system, and personal history of violence. Meanwhile, structural factors contributing to homelessness, in addition to high cost of health care, include absence of low-cost housing, lack of income support, low minimum wage, and lack of employment opportunities for low-skilled workers (Fazel et al., 2014). The absence of an adequate safety-net system puts individuals and families at further risk of becoming homeless, as those who face these vulnerabilities have few ways of getting through their situation (Burt, 2001). Furthermore, the United States has one of the most unequal income distributions in the developed world; research suggests that income inequality itself may be a promoter of homelessness, as countries with higher income inequality also have higher rates of homelessness (Fazel et al., 2014).

Intersectionality of Homelessness with Other Marginalized Groups

Race & Homelessness

In the United States, black persons make up roughly 40 percent of the homeless population, and 48 percent of homeless persons in families, yet just 12.5 percent of the general

population (Henry et al., 2016). Furthermore, black families have been found to be seven times more likely than white families to spend time in a homeless shelter (Jones, 2016). Homeless individuals have mortality rates three times higher than that of the general population, in addition to facing excessively high rates of chronic illness; therefore, the overrepresentation of homeless black persons plays an important role in explaining racial health disparities in America.

Meanwhile, Hispanic persons are, in contrast, underrepresented in the homeless population while also having poverty rates comparable to blacks. This may be due in part to cultural factors such as "familism" which contribute to multiple generations and extended families living together in the same household rather than individuals at risk for homelessness turning to the aid of social services. However, as observed in the 2004 *Encyclopedia of Homelessness,* "cultural values and norms do not adequately explain the Latino paradox" (Levinson, 2004). The author further indicates that, while residential segregation is increasing for Latinos, "non-Hispanic blacks still have the highest rates and tend to suffer the greatest amount of housing discrimination." This suggests that the disproportionate rates of homelessness in black persons is not simply explained solely by higher rates of poverty, indicating that the explanation may lie in lingering racial discrimination that still exists in the United States.

Despite the disproportionate impact of homelessness on black persons, little initiative has been taken by the United States government to address racial dynamics in homelessness, even though racial discrimination in housing, employment, and education has been illegal for more than 50 years (Jones, 2016). Regardless of official government policies, housing discrimination may persist due to societal attitudes perpetuating racial discrimination. Though these societal attitudes are difficult to track, a 2012 study published by the United States Department of

Housing and Urban Development found that, across 28 major metropolitan areas, black homebuyers who contact agents about recently advertised homes learn about 17.0 percent fewer available homes than their equally qualified white counterparts; meanwhile, there was no significant difference between Hispanic and white homebuyers in learning about available housing units (Turner et al., 2012). These findings illustrate the need to not only enact, but enforce fair housing protections to ensure that race-based discrimination does not continue to propagate.

Mental Health & Homelessness

It is estimated that 45 percent of all those who are experiencing homelessness in the United States also suffer from a mental health problem (Sells & Barber, 2013). In a study published in 2005 which assessed risk factors for homelessness among 10,340 patients with serious mental illness in a public mental health system, researchers found that homelessness was associated with the presence of a substance abuse disorder and a diagnosis of schizophrenia or bipolar disorder (Folsom et al., 2005). In addition, researchers have found an 11 percent prevalence of schizophrenia in homeless persons, compared with a lifetime prevalence of schizophrenia of just 1.3 percent according to the Epidemiological Catchment Area study (Foster, Gable, & Buckley, 2012).

The disproportional representation of mental illness in the homeless population may be explained in part by the deinstitutionalization movements throughout the latter half of the 20th century, such as the one that occurred in the 1980s under the Reagan administration. The Omnibus Budget Reconciliation Act, signed by President Ronald Reagan in 1981, repealed

community mental health legislation and instead allocated block grants to each state ("National Institute of Mental Health (NIMH)," 2015). The deinstitutionalization of mental health programs during this time coincided with a decrease in federal housing subsides, which fell from 7 percent of the federal budget in 1978 to just 0.7 percent by the late 1980s ("What Led to the Rise of Homelessness in the 1980s," 2017). Consequently, individuals who had been released from mental health institutions had few options in terms of housing, and were therefore susceptible to becoming homeless, or else went into the prison system. In fact, in 44 of 50 states, a jail or prison holds more people with mental illness than the largest state psychiatric hospital in that state (Fuller Torrey et al., 2014).

This holds true for Austin, in which the Travis County Jail is a larger provider of mental health services than the state psychiatric hospital, Austin State Hospital. Austin State Hospital has just under 300 beds, all of which are full at any time. Meanwhile, the number of individuals treated for mental health concerns at the Travis County Jail has risen from 250 to 650 individuals per month over the last ten years; this rise has led the Travis County jail to increase the number of beds it sets aside for mental health services, making it the largest provider of mental health services in Austin. Many of these individuals have not been convicted of a crime, and are instead being held in jail cells waiting for a hospital bed to become available (Weidaw, 2017).

Some have posited that mentally ill individuals have a harder time adjusting to the conditions of homelessness relative to those who are homeless and do not have mental illness. For instance, women who are both homeless and mentally ill have been found to be especially susceptible to victimization. This is particularly concerning considering that, at the same time, research has shown that that homeless individuals who are mentally ill also tend to seek help at

emergency shelters and psychological treatment facilities less often after a violent encounter than those without mental illness (Fox, Mulvey, Katz, & Shafer, 2016).

Incarceration & Homelessness

Rates of homelessness amongst the recently incarcerated are significantly higher than that of the general population. According to a study published in 2008, jailed persons are 7.5 to 11 times more likely to have been recently homeless than the general public (Erickson, Rosenheck, Trestman, Ford, & Desai, 2008). This suggests that the relationship between homelessness and incarceration may be bidirectional in nature, with conditions of homelessness serving as risk factors for incarceration. Furthermore, many homeless people are arrested simply for what is known under the law as "urban camping" – essentially, for simply being homeless (National Coalition for the Homeless, n.d.). A survey of 1,298 homeless individuals conducted by the Western Regional Advocacy Project found that 81 percent of those interviewed reported being harassed, cited, or arrested for sleeping in a public area; 77 percent of those interviewed reported being arrested for sitting down or lying down in public places (Boden & Messman, 2015).

Moreover, the lack of safety nets and social support in transitioning from prison back into the community places the recently incarcerated at high risk of becoming homeless. As few employers are willing to hire anyone with a criminal record, it is difficult for ex-inmates to earn enough money to apply for housing; in addition, policies exist in the United States that ban convicted felons from receiving public housing benefits. This leaves those who have been recently released from the prison system with few options, causing tens of thousands of ex-inmates to fend for themselves on the street upon release each year (Moraff, 2014).

The relationships that exist between homelessness, race, mental illness, and incarceration are often intertwined and multidirectional. For instance, in addition to mental illness being overrepresented in the homeless population, it is also overrepresented in the prison population (Fox et al., 2016). Therefore, it is crucial that policymakers and non-government organizations consider these relationships when designing and implementing legislation and resources aimed at eliminating risk factors to homelessness.

Undocumented Status & Homelessness

Another marginalized population that overlaps with the homeless population in the United States is undocumented immigrants. Furthermore, undocumented individuals in the United States often face additional impediments to accessing health care. For instance, the United States lacks an organized, national program that provides health care to undocumented immigrants, including children. A law enacted in 1986 (ENTALA) ensures treatment to any persons who arrive at a hospital ED until that patient is stable. However, the law does not require EDs to treat patients past the point of stability, leaving many undocumented individuals without any source of primary or non-emergent care. Instead, undocumented immigrants in the United States must rely on a "patchwork" system of safety-net providers including not-for-profit hospitals, FQHCs, and migrant health centers (Gusmano, 2012).

Chapter 3. Health Care Barriers and Health Disparities in Homeless Individuals

Individual ability to navigate the health care system may vary widely among those who experience homelessness. In general, many homeless individuals face several common barriers

when it comes to gaining access to health care services. Researchers have been able to identify four broad categories into which barriers to health care may fall: bureaucratic, personal, programmatic, and financial (Bassuk, Carman, & Weinreb, 1990). These barriers may prevent homeless persons from seeking or receiving health care until immediate health care intervention is necessary.

Financial Barriers

For America's homeless, one obvious barrier that restricts access to health care is being unable to afford care. Even those who have some form of insurance may face financial barriers to health care, which include difficulty gaining access to subspecialty care, underinsurance, restrictive eligibility criteria, and limited health care benefits (Hoshide, 2011). "Underinsurance" might include factors such as unaffordable insurance premiums and a lack of in-network providers that accept a given form of insurance.

Programmatic Barriers

Programmatic barriers to health care include lack of continuous care that results from a fragmented health care system, poor treatment and negative attitudes held by providers towards low-income and homeless patients, and a shortage of social services resources (Hoshide, 2011).

Personal Barriers

Personal barriers are barriers that prevent homeless individuals from accessing health care. Because the conditions of homelessness create immediate concerns such as food and shelter insecurity, health care may become a secondary concern for many. Mental illness and substance abuse may also serve as personal barriers to seeking health care, as do past negative experiences

with the health care system (Hoshide, 2011). The prevalence of these barriers amongst homeless individuals means that, even in major cities that might offer many health care services at no charge, patients may still not be able or willing to access these resources.

Bureaucratic Barriers

Even if a homeless individual manages to find a health care provider and has insurance, bureaucratic barriers may still disrupt accessibility of care. Bureaucratic barriers include long wait periods at clinics, extensive registration procedures that may require some form of identification or permanent address, lack of transportation to and from health care facilities, and inflexible appointment hours that may conflict with work or other commitments (Hoshide, 2011). Though not all clinics and hospitals require disclosure of insurance status and home address, many do. This bureaucratic barrier may then bring about an additional personal barrier in that some homeless patients may fear stigmatization and poor treatment on the basis of their housing status or lack of insurance ("Ask & Code: Documenting Homelessness Throughout the Health Care System," 2016).

Health Disparities Between Homeless and Housed Persons

Those who are homeless tend to have more predisposed health risks than their stably housed counterparts. One study published in 2008 that surveyed 1,017 patients at United States Health Care for the Homeless (HCH) clinics found higher prevalence rates of asthma, diabetes, AIDS/HIV, tuberculosis, substance abuse, and mental health problems compared to individuals in the general United States population (Zlotnick & Zerger, 2009). In the United States, rates of

tuberculosis have been found to be over 40 times higher in homeless individuals compared to the general population (Fazel et al., 2014).

The excess health risks faced by homeless individuals arises largely because of conditions that are common amongst those living on the streets or in crowded shelters. Under these conditions, individuals may face exposure to second-hand smoke, exposure to harsh weather, violence, theft of personal belongings including medications, poor nutrition, bed bugs, and social isolation. Such conditions bring about higher risks of contracting communicable disease (i.e. tuberculosis), physical injuries, mental illness, and substance abuse. Furthermore, factors such as poor nutrition may eventually result in chronic conditions that are expensive to manage, such as diabetes and ischemic heart disease (Fazel et al., 2014).

This wide range of health risks contributes toward a substantially higher rate of mortality in homeless people, with significantly excess risk seen in younger individuals. Amongst high-income countries, standardized mortality ratios amongst the homeless are on average 2 to 5 times higher than that of the general population (Fazel et al., 2014). A review of 77 Travis County medical examiner death reports of "transient" individuals between 2013 and 2014 further revealed risks of living on the street. The analysis showed that, while 86 percent of Travis County residents die of natural causes, just 29 percent of homeless individuals in Travis County die of natural causes, with deaths caused by accidents, homicides, and suicides occurring more frequently amongst the homeless (Barragán, 2015). Given this combination of predisposed health risks and barriers to health care, it is no surprise that so many homeless persons seek out care at EDs, often for health problems that could have been treated with early primary care intervention.

Health Care and Health Status of Austin's Homeless Individuals

In terms of access to health care, 41 percent of Austin's homeless population access health care in a hospital, 31 percent access health care in a clinic, 16 percent do not go for care, 10 percent access health care at the VA, and 2 percent access health care elsewhere ("other"). In addition, reported usage of emergency medical services is high, with 63 percent report having been to the ED within the past six months, and 40 percent report having been taken to the hospital in an ambulance within the past 6 months. Furthermore, 33 percent report having been hospitalized in the past 6 months. In terms of health status, about 20 percent report having been diagnosed with Hepatitis C; over 25 percent report a history of heat stroke or heat exhaustion; another 25 percent suffer from heart disease, arrhythmia, or irregular heartbeat. Sixty percent report having had a drug or alcohol abuse problem sometime in their life, with 38 percent that report being treated and then returning to drinking or using. Forty-five percent have mental health issues; 52 percent report having no planned activities that bring them happiness or fulfillment (ECHO, 2016).

The low health status and high rates of ED usage amongst Austin's homeless population indicate a gap in primary health care access. Closing this gap may not only improve the health of homeless individuals, but would also lower public costs by reducing the number of ED visits. Assessing limitations of the health care resources currently available to homeless individuals is a necessary first step in developing solutions to narrowing the gap.

PART II. FEDERAL, STATE, AND LOCAL RESOURCES FOR HOMELESS INDIVIDUALS

The following section first lists and describes several federal, state, and local resources that help facilitate access to health care in homeless individuals. Next, limitations to these programs that allow ED overuse to persist are discussed.

Chapter 4. Federal, State, and Local Resources

Federal Resources

Medicare

Medicare, a social insurance program run and partially funded by the federal government, provides health insurance benefits to American citizens 65 years of age and over, as well as to those with certain terminal illnesses and disabilities. Medicare is funded mainly by a combination of federal funding, payroll taxes, and premiums of Medicare enrollees, and includes four parts: Part A (hospital coverage), B (medical coverage), C (Medicare Advantage plans), and D (prescription drug coverage) ("What Is Medicare?," 2017).

One highly criticized part of Medicare Part D is a coverage gap that is commonly known as the "donut hole." Each year, Part D provides coverage for medications up to a certain level, after which beneficiaries must pay for them out of pocket before coverage resumes. However, the ACA has gradually narrowed this gap; as of 2017, those who fall within the gap pay only 40 percent of the total price of brand-name drugs (Barry, 2017). The coverage gap is currently scheduled to be completely phased out by 2020.

Medicaid

Today, Medicaid is the largest provider of health coverage in the United States (Medicaid, n.d.). As of December 2016, Medicaid provides health coverage for 69 million Americans, including low-income adults, children, pregnant women, elderly adults, and people with disabilities. This includes nearly 4.8 million residents covered by Medicaid and CHIP in Texas alone (Medicaid, 2017).

Texas, as a result of deciding against Medicaid expansion, has the biggest health coverage gap in the United States, with 684,000 residents that are ineligible for both Medicaid and subsidies to help with the cost of private health insurance plans. Those who are eligible in Texas include the aged, blind, and disabled; pregnant women whose income is less than 198 percent of the poverty level; children whose household incomes are up to 201 percent of the poverty level; and adults with dependent children whose household income does not exceed 18 percent of the poverty level, which amounts to just $3,600 per year (tying Texas with Alabama for the lowest poverty threshold in the country) (Health Insurance Resource Center, 2017). Moreover, Medicaid provider acceptance rates are relatively low in Texas; only 65 percent of all physicians accept Medicaid in Texas, compared to 82 percent of physicians nationwide (North Texas Regional Extension Center, 2015).

United States Department of Veterans Affairs

The Veterans Affairs (VA) health care system provides health care for anyone who has served in the army, naval, or air service (except those who received a dishonorable discharge). VA Health comprises America's largest integrated health care network, and serves nearly 9

million military veterans each year. VA health care centers provide a comprehensive range of services, including primary care, physical therapy, radiology, pharmacy, and mental health care; some centers also offer additional subspecialty services (Veterans Health Administration, 2017). Veterans released under conditions other than dishonorable discharge may also be eligible for VA health care benefits and programs such as TRICARE or the Veterans Health Care Program.

In addition, the VA also offers a program called Health Care for Homeless Veterans (HCHV). The HCHV Program, which started in 1987 as the Homeless Chronically Mentally Ill (HCMI) Program, strives to provide housing and outreach services to homeless military veterans. This serves to extend assistance past VA health centers, utilizing case management, clinical outreach, and the contract residential treatment program, which provides emergency housing, rehab, and safe havens (Hallett, 2013). In 2015, HCHV provided services to 157,000 veterans; in the same year, nearly 7,600 veterans exited the HCHV Program into independent housing (U.S. Department of Veterans Affairs, 2016).

The Projects for Assistance in Transition from Homelessness (PATH)

The Projects for Assistance in Transition from Homelessness, or PATH, is a health care program that provides outreach to the homeless and disenfranchised. PATH, which was the first major federal legislative response to homelessness, is funded by the federal Center for Mental Health Services and authorized by the Public Health Services Act (Substance Abuse and Mental Health Services Administration, 2016). This program provides a wide array of services, including outreach, screening, diagnostic assessment, treatment, rehabilitation, mental health

services, case management, educational services such as HIV prevention activities, and housing services (Texas Department of State Health Services, 2014).

State Resources

Central Health

Central Health is a political subdivision of Texas created in 2004 that aims to improve access to health care safety net systems for low-income, uninsured, and underinsured residents in Travis County. Partners and affiliates of Central Health include the University of Texas Dell Medical School, Community Care Collaborative (CCC), CommUnity Care, Seton Health Care Family, and Austin Travis County Integral Care (Central Health, 2016a).

With these affiliates, Central Health has been able to develop new health care delivery models through patient-centered, more affordable care. For instance, in June of 2016, Central Health, the CCC, and Dell Medical School designed and implemented a model that aimed to expand access to musculoskeletal care, which has been identified as one of the highest-need specialties for low-income and uninsured Travis County residents. One of the goals of this model was to reduce wait lists for orthopedic appointments, as low-income patients must wait for over a year for an appointment in some cases. By the end of 2016, the partnership had succeeded in reducing the waitlist by 400 patients (Central Health & The University of Texas Dell Medical School, 2017).

Local Resources

Federally Qualified Health Centers

In addition to federal and state resources for homeless individuals, local communities often have their own set of services. Some cities have Federally Qualified Health Centers (FQHCs), which are community-based non-profit primary care centers funded by the Health Resources and Services Administration (HRSA). FQHCs are sustained through the aid of a number of special benefits, including receiving enhanced reimbursement from Medicare and Medicaid. By operating on a sliding fee scale, FQHCs aim to ensure that lack of insurance or income do not serve as barriers against patients receiving health care (FQHC Associates, 2016). Health Care for the Homeless, Inc. (HCH), for instance, is a type of FQHC that serves as one model for health care for homeless persons. HCH is a private non-profit health agency that serves homeless patients, which implements a comprehensive strategy of direct service, community education, and policy advocacy at all levels ("Frequently Asked Questions about Health Care for the Homeless," 2011). The major FQHC in Austin, Texas, is CommUnityCare, which is Travis County's largest provider of safety-net primary care services. Safety-net clinics that are part of the CommUnityCare Network include the clinic inside of the Austin Resource Center for the Homeless (ARCH), Austin Travis County Integral Care (by referral only), People's Community Clinic, el Buen Samarito, and David Powell (Community Care Texas, n.d.).

Medical Access Program (Austin, Texas)

In Austin, homeless individuals qualify for a number of programs that help them obtain access to health care. Among these is the Medical Access Program (MAP), a local program that

provides health care access to Travis County residents who fall below 200 percent of federal poverty standards. MAP is funded by Central Health, which is a political subdivision of the state of Texas that seeks to eliminate health disparities within Travis County ("Central Health: About Us," 2016).

Services covered by MAP that do not need pre-approval include primary care, pharmacy services, specialty care, and urgent care, with co-payments ranging from around $0 to $25 per visit. Pharmacy services covered by MAP include prescriptions and disposable supplies such as insulin syringes; a 30-day supply comes with a co-payment of $10 or less, and a 31 to 90-day supply comes with a co-payment of $20 or less. Services that need pre-approval include hospital in-patient services, specialty dental services, certain outpatient services (surgery, occupational therapy, physical therapy, and speech therapy), and home health services. Other services are not covered at all, such as services for a patient in an institution for tuberculosis or a mental disease, substance abuse treatment programs, dialysis, and services provided by doctors outside of the MAP list (Central Health, 2016b). Lack of coverage for those with tuberculosis, mental illness, and substance use problems poses a concern for homeless individuals, as these conditions are more prevalent amongst the homeless population (Zlotnick & Zerger, 2009). Health care centers that provide care for MAP patients include CommUnityCare clinics, Lonestar Circle of Care, People's Community Clinic, and El Buen Samaritano (*Medical Access Program: Medical Home,* 2017). Although MAP does cover specialty care, waitlists for many of the1se services are often long. In some cases, patients with government-sponsored coverage such as MAP may spend up to a year waiting for an appointment to open up at a specialty clinic (Roser, 2015).

Medical Case Managers

Case management is the collaborative process of assessing, planning, facilitating coordinating, evaluating, and advocating for services in order to meet an individual's or family's health needs (Case Management Society of America, n.d.). Hospital caseworkers are important in establishing continuity of care, as they typically remain with clients for long periods of time. This case-by-case, client-centered approach allows the case manager to identify health care providers and facilities in a manner which is cost-effective, timely, and optimal for the client. Furthermore, the philosophy behind case management is that providing effective care for a client is beneficial not only to that individual, but to the health care system as a whole, including the client's support system, health care delivery systems, and reimbursement sources (Case Management Society of America, n.d.).

Case managers help their clients attain the health care they need not only directly by identifying health care resources, but also indirectly by helping break down some of the barriers to health care that may exist specifically for homeless persons. For instance, a social worker might assist a homeless client with an application for Social Security Disability (SSD) or Supplemental Security Income (SSI). By receiving SSI, the client then becomes eligible for housing. This, in turn, helps them qualify for public health insurance such as Medicare or Medicaid (McMurray-Avila, Ciambrone, & Edgington, 2009).

A key focus of case management is client outreach. However, as homeless individuals lack a fixed, permanent address, reaching out to and engaging with homeless clients is often challenging (Institute of Medicine (US) Committee on Health Care for Homeless People, 1988).

Furthermore, establishing trust with the client is crucial for case managers, as some chronically homeless individuals are mistrusting towards social services which may have failed them in the past. According to a consumer participation outreach survey published in 2012, homeless individuals most commonly reported issues of mistrust and privacy concerns when asked about hesitations about working with outreach workers (Jenkins, Rabbitt, Meinbresse, & Tilley, 2012).

Because of these issues of mistrust, maintaining a continuous, personal relationship over a long period of time with each client is important in order to build trust and to ensure that the client follows through with their treatment plans (Committee on Health Care for Homeless People, 1988). Current means of client contact include face-to-face meetings, in which the caseworker might go out on the streets to meet their client where they are, and telephone contact. In order to help facilitate tracking of homeless clients, suggested strategies for homelessness outreach programs include implementing smart phones to monitor changes in electronic records, and hiring homeless or formerly homeless individuals as outreach workers (Olivet, Bassuk, Elstad, Kenney, & Jassil, 2010).

Shelters and Transitional Living Facilities

Emergency shelters and transitional living centers are a crucial resource and immediate source of support for homeless individuals. Two major homeless shelters in Austin are the Austin Resource Center for the Homeless (ARCH), and the Austin Shelter for Women and Children (ASWC) which is operated by Salvation Army.

The ARCH serves as the initial point of entry into the social services system for those experiencing homelessness, and includes access to a common-use room, public restrooms and

showers, storage lockers, and meals each night. A lottery for beds occurs each night beginning at 6:00PM for single adult men only ("Austin Resource Center for the Homeless - ARCH," n.d.). Though the ARCH only offers beds to men at night, both men and women are allowed to use the Day Resource Center during daytime. Furthermore, the ARCH offers social service resources such as case management and a clinic located on the first floor that provides health care and specialized services; these services are available to homeless individuals by both a walk-in and appointment basis ("CommUnityCare : Locations : Austin Resource Center for the Homeless (ARCH)," n.d.). In 2015 and 2016, over 6,000 men and women used resources at the ARCH, averaging to about 423 individuals each day and 230 men sleeping there each night ("ARCH," 2013).

The ASWC is an emergency shelter for women and children, located just down the street from the ARCH. This center has a capacity of 60 beds, with 54 beds designated for women with children and six for single women. The facility offers a child care center for children who are between eighteen months and four years old, a kitchen and dining area, a garden, and a computer learning center; in addition, the ASWC provides case management, therapy, employment assistance, and life skills training (Salvation Army Austin, 2017).

Coordinated Assessment

Coordinated Assessment is a program that was created by the Continuum of Care Program (a program created by the U.S. Department of Housing and Urban Development which provides funding for non-profits and state and local government to re-house the homeless) to help patients apply for subsidized housing in Austin ("Continuum of Care Program," n.d.,

"Coordinated Assessment – ECHO," n.d.)**.** In the assessment and referral process, an individual who has entered an emergency shelter completes an assessment administered by a case manager; this assessment gauges the level of intervention needed for each individual or household using the Vulnerability Index-Service Prioritization and Decision Assistance Tool, which is comprised of 50 questions assessing one's health and well-being (ECHO, 2016). Components of this tool include history of homelessness and housing, risks of harm to self or others, interactions with emergency services, social relations or networks, mental health, and physical health ("The Vulnerability Index - Service Prioritization Decision Assistance Tool (VI-SPDAT)," 2014).

Next, case managers or clinicians review the assessment, and determine the place of that individual or household on the waiting list; those with more urgent or immediate needs (such as those who have experienced a longer length of stay in homelessness, more episodes of homelessness, and disabilities) are prioritized for housing placement over those whose needs have been deemed "less intensive" (National Alliance to End Homelessness, 2013). Housing programs include rapid-rehousing, which helps solve the immediate challenges of homelessness while minimizing the amount of time spent on the streets; the goal of rapid re-housing is to supply just enough assistance to help an individual or household exit homelessness. Another program option is permanent supportive housing, which is more long-term and costly than rapid-rehousing and is therefore limited to those who need a higher level of assistance to exit homelessness (Housing and Urban Development, 2014).

One of the most effective ways of enhancing the health of homeless individuals is perhaps the most obvious basic need: providing stable, subsidized housing as quickly as possible before providing other needed services, which is referred to as the housing first approach

(ECHO, 2017). Critics may call this a handout, but in reality, providing subsidized housing to those who are homeless is far more economical than maintaining the costs of long-term homelessness. In fact, it costs 40% less per year to place a homeless individual in supportive housing than it does to support that person while they are living on the street each year (PATH Welcome Home Kit, 2012).

The economic advantage of providing permanent, stable housing to homeless individuals and families can be explained by the high public cost of health care associated with homelessness. Those who are living on the streets or in crowded homeless shelters face high risks of exposure to the natural elements, violence, and communicable diseases such as TB and respiratory illnesses, and also have high rates of chronic illnesses that are exacerbated by their living conditions (National Health Care for the Homeless Council, 2011b). This contributes to high rates of ED usage, which costs around $3,700 per visit, which quickly adds up, as homeless individuals visit the ED an average of five times a year (Green Doors, n.d.). For the most frequent ED users, permanent, safe housing can provide the stability and shelter needed to manage their health, allowing them to utilize preventative care rather than to rely on EDs.

Between October 2014 and March 2016, over 5,000 people completed a Coordinated Assessment in Austin. However, according to the Austin ECHO Homelessness Needs and Gaps Report published in 2016, the city of Austin has just 801 emergency shelter beds, 1,042 permanent supportive housing beds, 376 transitional housing beds, 6 recuperative care beds, and no beds for end-of-life or hospice services. This means that, of the 5,000 individuals who completed a Coordinated Assessment, only a maximum of 2,225 could be housed at any point.

As a result of this limited housing availability, those who do not receive housing placement right away may spend several months on a wait list.

Austin Travis County Integral Care

Austin Travis County Integral Care (ATCIC) is a local program that provides community services to Travis County residents with behavioral and intellectual disabilities. Services offered by ATCIC include psychiatric evaluations, inpatient treatment, employment and vocational services, medication treatment, and 24-hour crisis interventions.

In addition to adult behavioral services, intellectual and developmental disability services, and child and family services, ATCIC also provides psychiatric crisis and jail diversion services. Jail Diversion Services help to keep those with mental illnesses, developmental disabilities, or substance abuse problems from facing incarceration, and also provide re-entry and community supervision services (Austin Travis County Integral Care, 2013).

Chapter 5. Limitations within These Programs Allow ED Overuse to Persist

Identifying health disparities in the homeless population and enacting change on the local level is important to improve health care for homeless individuals. Texas currently has the highest percentage of uninsured residents in the nation, with 16 percent of the population, or three million residents, with no form of health insurance (Kaiser Family Foundation, 2015). In Travis County, an estimated 18% of those under age 65 were uninsured in 2014 (Community Advanced Network, 2015). Limited access to affordable insurance leads to other barriers in attempting to access health care – this holds especially true for homeless persons. Even if an individual has health insurance, several bureaucratic, programmatic, and personal barriers may

prevent access to care. For example, though CommUnityCare serves uninsured and homeless patients, patients often spend months on waiting lists before securing an appointment. Furthermore, the lack of continuous care that has resulted from a fragmented health care system makes it difficult for patients to access mental health services, receive subspecialty care, and keep track of medical records that might be necessary to apply for social security benefits. For these reasons, those who are homeless may either be forced to ignore their health needs, or else may turn to EDs to receive care when there is no other clear option.

Not only is unnecessary ED use an unfavorable option for patients, it also proves to be costly for hospitals and therefore for local and state governments. In 2016, it was estimated that the top 250 high-cost homeless users in Travis County spend an average of $222,000 annually due to Emergency Medical Systems (EMS) transports, inpatient hospital days, and ED visits (ECHO, 2016). In order to prevent patients from turning to EDs as a source of primary care, health care must be made more accessible to the entire population. In order to design new resources and to improve existing resources that help homeless and low-income individuals gain access to health care in Austin, an important first step is to identify which barriers to health care most affect Austin's homeless, and which resources are most helpful to these individuals.

PART III. CASE STUDY:

HEALTH STATUS AND PATIENT-PERCEIVED BARRIERS TO HEALTH CARE AT A STUDENT-RUN FREE CLINIC

Chapter 6. Case Study Background, Purpose, & Methodology

Background

As factors such as lack of insurance and identification may prevent homeless individuals from seeking health care at primary care practices, those who are homeless often turn to free clinics as a source of primary care. Despite this, there is little existing literature on the role of student-run free clinics in the United States health care system. Austin's only student-run free clinic provides services to all individuals regardless of identification, insurance, or residency status. The clinic operates on most Sundays between 2:00PM and 4:00PM in a church basement, and is staffed by volunteer physicians, medical students, nurse practitioners, and nursing and pre-health undergraduate volunteers.

Because of its proximity to a major homeless shelter in downtown Austin, most of this clinic's patient population is homeless. For many of these patients, who often lack health insurance, this free clinic is their primary source of health care. However, the clinic is not comprehensive, and is equipped primarily for wound care, minor acute care, treatment for diabetes and high blood pressure, and medical advice. The clinic also has psychiatric nurse practitioner students, as well as a social services team which strives to help connect patients to resources they need, including health care specialists, directions to CommUnityCare Clinics, and guidance on how to apply to Medical Access Program.

Purpose

This study seeks to identify barriers to health care experienced by patients at a student-run free clinic in Austin whose patients are primarily uninsured and homeless, and to ultimately assess how these barriers correlate with the health status of the patients. In addition, the study aims to identify how helpful a variety of resources are in helping patients at this clinic gain access to health care. Through this research, I sought to answer the following questions:

(1) How do patients rate their quality of health care, ease of getting health care, and health status?

(2) What barriers to health care do patients at this student-run free clinic face?

(3) Which resources are available and helpful to patients at this student-run free clinic?

In the future, the results of this study could potentially be used to help design and implement interventions and resources that more effectively facilitate health care access for this free clinic's patient base.

Methodology

Study Design

This study involved primary data collection using a cross-sectional survey that was administered to patients at a student-run free clinic in downtown Austin over a seven-week period in the spring of 2017. Each participant was administered a survey that was designed to collect quantitative data including patient demographic information, patient perceived health

status, patient perceived barriers to health care access, and patient ratings of a variety of social services available in Austin. Furthermore, the survey also allowed for qualitative data collection through a "Notes" section, in which the interviewer took written notes if a patient chose to elaborate on any of their responses.

The questionnaire, included in the appendix, consisted of a combination of multiple choice questions and Likert scale-type questions. During each interview, questions were read from a survey, and the interviewer manually wrote responses on the survey form. No information that could be used to identify the subject was recorded. In addition, patients were not compensated for participation in any way. Interviews were conducted during clinic hours, every Sunday from 2:00PM to 4:00PM for 7 weeks in February and March of 2017. To establish a semi-private environment for each interview, screen panels were set up in one section of the clinic far enough away from other patients and staff such that responses could not be overheard.

Target Population

The target population for this study was patients who were eligible to receive care at the student-run free clinic in downtown Austin. As this clinic is located near from two major Austin homeless shelters, most of the patients who attend the clinic are homeless, and many are uninsured. Criteria for inclusion included (a) 18 years of age or older, (b) ability to understand and speak English, (c) ability to understand the terms of the consent form by answering pre-screening questions, and (d) willingness to volunteer for an interview. Criteria for exclusion included children younger than the age of 18, and those who could not accurately answer at least 80 percent of the pre-screening questions.

Protection of Human Participants

Approval from the University of Texas at Austin Institutional Review Board (IRB) was obtained prior to data collection. A verbal informed consent was obtained from each participant prior to being interviewed.

Procedures for Collecting Data and Survey Design

The survey used for these patient interviews was a semi-structured questionnaire administered verbally and face-to-face with participants. Patients were recruited from the waiting area of the clinic, and had the opportunity to interview either while waiting or after they had completed the clinic visit. The survey included six sections with a total of 40 questions that were based on questions that were asked in the RAND Homelessness Questionnaire ("Health and Well Being" section) and Survey of Fragile Families ("Health and Health Behavior" section) (RAND, 1990; Reichman *et al.*, 2001). The six sections of the survey included demographic information, current means of health care, hospital and ED usage, self-rated health status, perceived barriers to health care, and resources.

Survey questions that asked about perceived barriers to health care were based on previous studies that looked into barriers to health care for homeless populations (Hoshide, 2011); (Cadzow, Servoss, & Fox, 2007), as well as the "2016 Homelessness in Austin: Current Needs and Gaps" report. These barriers included cost of health care, lack of insurance, lack of transportation to and from health facilities, not knowing where to get treated, not having necessary identification, not knowing where to find a provider that accepts their coverage, nervousness about filling out forms, self-consciousness about physical appearance, and poor

treatment received at a health care facility in the past. Participants also had the option to describe additional barriers that were not already listed.

The last section of the survey was comprised of questions that gauged levels of helpfulness of several resources that seek to facilitate health care access for low-income and/or homeless persons in Austin; resources listed in the survey included federal resources (Medicaid, Medicare, Health Care for Homeless Veterans) as well as state and local resources (caseworkers, shelters/transitional living facilities, Medical Access Program, Coordinated Assessment, Austin Travis County Integral Care, and PATH/ACCESS). Participants also had the option to describe additional resources that were not already listed. These questions served to identify which of these resources are underutilized and which are used the most. The estimated time to complete each survey was about 15 minutes.

To assess understanding of the study and expectations for participants, immediately after reading the consent form, each patient was asked questions to screen for whether or not they understood the terms of the consent form (including that the interview was entirely optional, that they could choose to stop the interview at any time, and the nature of the questions that would be asked). To address language barriers, the interviewer first asked whether the participant was English speaking, and excluded patients from the study who do not speak English. Additionally, patients at the clinic have varied levels of education and health literacy. To account for this, the survey was written using minimal academic or health jargon, and reads at a Flesch-Kincaid Grade Level of 6.9. Prior to the interview, each patient was informed of the study risks and information regarding the types of survey questions that would be asked.

Data Analysis

Following the data collection period, data analysis involved generating descriptive statistics for categorical variables in order to (1) describe how patients rated their quality of health care, (2) report the extent to which patients are impeded by various potential health care barriers, and (3) report helpfulness ratings for various social services in Austin designed to aid people in gaining access to health care.

Chapter 7. Results

Demographic Information

A total of 24 individuals completed the survey. Demographic data and health-related information of the sample are listed in Table 1. Of the 24 patients surveyed, 95.8 percent met the definition of "homeless." Over half of patients surveyed had spent most of their nights over the past 30 days in a shelter or transitional living facility; 29.2 percent had spent most of their nights on the street or some other outdoor location; 8.3 percent had spent most of their nights in prison.

Of the patients surveyed, 87.5 percent of subjects were men, and 12.5 percent were women. The mean age of these patients was 48.6 years. Regarding race and ethnicity, 29.2 percent of patients identified as black, 29.2 percent as Hispanic, and 25.0 percent as white. Regarding employment status, 79.2 percent were not in paid employment, with the majority of these individuals either looking for work or unemployed for a medical reason. Furthermore, 62.5 percent of patients reported an average income of less than $10,000 per year. In regard to

education, 33.3 percent reported their highest level of education as some high school; 25.0 percent had graduated from high school; and 20.9 percent had a college degree or higher.

Table 1. Demographics and health-related information		
Variable	**n (%)**	**Mean ± Standard Deviation**
Gender	--	--
Women	3 (12.5)	--
Men	21 (87.5)	--
Age	--	48.6 ± 13.2
Race/ethnicity	--	--
White	6 (25.0)	--
Black	7 (29.2)	--
Hispanic	7 (29.2)	--
Asian	1 (4.2)	--
Mixed	3 (12.5)	--
Marital status	--	--
Divorced	3 (12.5)	--
Married	1 (4.2)	--
Single	15 (62.5)	--
Separated	3 (12.5)	--
Widowed	2 (8.3)	--
Children	--	--
Yes	10 (41.7)	--
No	14 (58.3)	--
Number of children	--	2.1 ± 1.6
Paid employment status	--	--
Full-time	1 (4.2)	--
Part-time	3 (12.5)	--
Self-employed	1 (4.2)	--
Not in paid employment	19 (79.2)	--
Reason for not being in paid employment	--	--
Looking for work	6 (31.6)	--
Disabled	5 (26.3)	--
Retired	3 (15.8)	--
Laid off	1 (5.3)	--
Other	4 (21.1)	--
Income brackets	--	--
$0-$10,000 / yr	15 (62.5)	--

$10,001-$20,000 / yr	7 (29.2)	--
$20,001-$30,000 / yr	1 (4.2)	--
$30,001-$60,000 / yr	1 (4.2)	--
Highest education	--	--
Some high school	8 (33.3)	--
High school graduate	6 (25.0)	--
GED	2 (8.3)	--
Vocational training	1 (4.2)	--
Some college	2 (8.3)	--
College degree	5 (20.8)	--
Housing over past 30 days	--	--
Own house/apartment	1 (4.2)	--
Family or friend's house/apartment	1 (4.2)	--
Shelter	13 (54.2)	--
Street	7 (29.2)	--
Prison	2 (8.3)	--
Insurance	--	--
MAP	12 (50.0)	--
Medicaid	3 (12.5)	--
Medicare	1 (4.2)	--
None	7 (29.2)	--
Other	1 (4.2)	--
Primary health care location	--	--
Private practice	3 (12.5)	--
Walk-in clinic	8 (33.3)	--
Hospital	2 (8.3)	--
ED	5 (20.8)	--
Other	4 (16.7)	--
None	3 (12.5)	--
Perceived quality of health care (0-4)	--	3.6 ± 1.7
(0) No care	2 (8.3)	--
(1) Poor	2 (8.3)	--
(2) Fair	3 (12.5)	--
(3) Good	1 (4.2)	--
(4) Very good	5 (20.8)	--
(5) Excellent	11 (45.8)	--
Hospitalized in the past 6 months?	--	--
Yes	9 (37.5)	--
No	15 (62.5)	--

Number of ED visits in the past 6 months	--	2.1 ± 4.0
Any non-emergent ED visits in the past 6 months?	--	--
Yes	4 (16.7)	--
No	20 (83.3)	--
Perceived health status (1-5)	--	3.2 ± 1.3
(1) Poor	3 (12.5)	--
(2) Fair	3 (12.5)	--
(3) Good	10 (41.7)	--
(4) Very good	3 (12.5)	--
(5) Excellent	5 (20.8)	--
Ease of accessing health care (1-4)	--	2.9 ± 1.0
(1) Very difficult	3 (12.5)	--
(2) Moderately Difficult	5 (20.8)	--
(3) Moderately Easy	8 (33.3)	--
(4) Very easy	8 (33.3)	--
Health care avoidance when sick?	--	--
Yes	8 (33.3)	--
No	16 (66.7)	--

Current Means of Health care

When asked about type of health insurance, 50.0 percent of patients reported using the Medical Access Program (MAP), 29.2 percent had no form of insurance, 12.5 percent used Medicaid, and 4.2 percent used Medicare. Fifty percent of patients reported their primary health care location as a walk-in clinic; 20.8 percent reported their primary health care location as an ED. Forty-six percent of patients reported their quality of health care as excellent, with a mean rating of quality of health care of 3.6 out of 4.

ED Usage

Thirty-eight percent of patients had visited an ED within the past six months; furthermore, 16.7 percent of all patients reported visiting the ED for a non-emergent problem at least once within the past six months.

Patient-perceived Health Status, Ease of Accessing Health Care, and Health Care Avoidance

Mean health status was 3.2 out of 5. Mean ease of accessing health care was 2.9 out of 4. One-third of patients reported having avoided health care in the past even though they were sick.

Patient Ratings of Health Care Barriers

Patient ratings of health care barriers are listed in Table 2. The highest barrier to accessing health care was lack of transportation to and from health care facilities, with 10 out of the 24 total patients reporting that lack of transportation prevents them from seeking or receiving medical care to a high extent. The next highest reported barrier was cost of health care, followed by nervousness about filling out forms, lack of insurance, and not having necessary identification. The lowest barrier to accessing health care reported was poor treatment at a health care facility in the past.

Table 2. Health Care Barriers

Barrier: ("To what extent have the following factors prevented you from seeking or receiving medical care?")	**n (%)**	**Mean ± Standard Deviation**
Cost of health care	--	1.3 ± 1.3
(0) Not at all	11 (45.8)	--
(1) To a low extent	2 (8.3)	--
(2) To a moderate extent	4 (16.7)	--
(3) To a high extent	7 (29.2)	--
Lack of insurance	--	1.1 ± 1.4
(0) Not at all	13 (54.2)	--
(1) To a low extent	2 (8.3)	--
(2) To a moderate extent	2 (8.3)	--
(3) To a high extent	7 (29.2)	--
Lack of transportation	--	1.5 ± 1.4
(0) Not at all	9 (37.5)	--
(1) To a low extent	5 (20.8)	--

(2) To a moderate extent	0	--
(3) To a high extent	10 (41.7)	--
Not knowing where to get treated	--	1.0 ± 1.2
(0) Not at all	12 (50)	--
(1) To a low extent	4 (16.7)	--
(2) To a moderate extent	4 (16.7)	--
(3) To a high extent	4 (16.7)	--
Not having necessary identification	--	1.1 ± 1.3
(0) Not at all	12 (50)	--
(1) To a low extent	4 (16.7)	--
(2) To a moderate extent	2 (8.3)	--
(3) To a high extent	6 (25)	--
Not knowing where to find a provider that accepts my coverage	--	0.8 ± 1.1
(0) Not at all	14 (58.3)	--
(1) To a low extent	4 (16.7)	--
(2) To a moderate extent	3 (12.5)	--
(3) To a high extent	3 (12.5)	--
Nervousness about filling out forms	--	1.2 ± 1.3
(0) Not at all	11 (45.8)	--
(1) To a low extent	4 (16.7)	--
(2) To a moderate extent	2 (8.3)	--
(3) To a high extent	7 (29.2)	--
Self-consciousness about appearance	--	0.9 ± 1.2
(0) Not at all	13 (54.2)	--
(1) To a low extent	4 (16.7)	--
(2) To a moderate extent	3 (12.5)	--
(3) To a high extent	4 (16.7)	--
Poor treatment at a health care facility in the past	--	0.6 ± 1.0
(0) Not at all	16 (6.7)	--
(1) To a low extent	2 (8.3)	--
(2) To a moderate extent	5 (20.8)	--
(3) To a high extent	1 (4.2)	--

Patient Usage and Ratings of Health-related Resources

Patient usage ratings of various resources are listed in Table 3. The highest rated resource overall was the Medical Access Program (MAP), which yielded a mean rating of 3.2 out of 4, and was used by 17 out of the 24 respondents. The next highest rated resource was Medicaid, with a mean rating of 3.1 out of 4, which was used by 8 respondents. The lowest rated resource was the PATH/ACCESS Program, which was rated as 2.0 out of 4; however, only one patient had reported ever using PATH/ACCESS. The next lowest rated resource was shelters or transitional living facilities, which yielded a mean rating of 2.4 out of 4, and was used by 20 out of 24 of the respondents.

Table 3. Patient ratings of resources

Resource	**n_{usage} (% out of 24)**	**n_{rating} (% out of n_{usage})**	**Mean ± Standard Deviation (1-4)**
Medical Access Program	17 (70.8)	--	--
Rating	--	--	3.2 ± 1.7
(1) Not helpful	--	0 (0)	--
(2) Somewhat helpful	--	6 (35.3)	--
(3) Helpful	--	1 (5.9)	--
(4) Very helpful	--	10 (58.8)	--
Medicaid	8 (33.3)	--	--
Rating	--	--	3.1 ± 1.6
(1) Not helpful	--	0 (0)	--
(2) Somewhat helpful	--	3 (37.5)	--
(3) Helpful	--	1 (12.5)	--
(4) Very helpful	--	4 (50)	--
Medicare	2 (8.3)	--	--
Rating	--	--	2.5 ± 0.8
(1) Not helpful	--	1 (50)	--
(2) Somewhat helpful	--	0 (0)	--
(3) Helpful	--	0 (0)	--
(4) Very helpful	--	1 (50)	--

Health Care for Homeless Veterans	2 (8.3)	--	--
Rating	--	--	3.0 ± 0.9
(1) Not helpful	--	0 (0)	--
(2) Somewhat helpful	--	1 (50)	--
(3) Helpful	--	0 (0)	--
(4) Very helpful	--	1 (50)	--
Caseworkers	19 (79.2)	--	--
Rating	--	--	3.0 ± 1.6
(1) Not helpful	--	3 (15.8)	--
(2) Somewhat helpful	--	4 (21.1)	--
(3) Helpful	--	2 (10.5)	--
(4) Very helpful	--	10 (52.6)	--
Shelters or Transitional Living Facilities	20 (83.3)	--	--
Rating	--	--	2.4 ± 1.5
(1) Not helpful	--	6 (31.6)	--
(2) Somewhat helpful	--	4 (21.1)	--
(3) Helpful	--	3 (15.8)	--
(4) Very helpful	--	6 (31.6)	--
Coordinated Assessment	21 (87.5)	--	--
Rating	--	--	2.9 ± 1.7
(1) Not helpful	--	4 (26.7)	--
(2) Somewhat helpful	--	2 (13.3)	--
(3) Helpful	--	1 (6.7)	--
(4) Very helpful	--	8 (53.3)	--
Austin Travis County Integral Care	8 (33.3)	--	--
Rating	--	--	2.9 ± 1.6
(1) Not helpful	--	3 (37.5)	--
(2) Somewhat helpful	--	0 (0)	--
(3) Helpful	--	0 (0)	--
(4) Very helpful	--	5 (62.5)	--
PATH / ACCESS Program	1 (4.2)	--	--
Rating	--	--	2.0 ± 0.4
(1) Not helpful	--	0 (0)	--
(2) Somewhat helpful	--	1 (100)	--
(3) Helpful	--	0 (0)	--
(4) Very helpful	--	0 (0)	--

Notes

During interviews, additional patient comments and explanations of responses were recorded in the notes section of the survey. Across the 24 survey participants, limitations to the MAP were mentioned by three participants; these limitations included copays for services that the patient could not afford, limited usefulness in helping obtain medications, and difficulty getting appointments with specialists. One patient noted that MAP was helpful in emergency situations and in receiving TB tests. Another patient noted that, though they had Medicaid, it was difficult to find a dentist who accepted Medicaid patients.

Difficulties in receiving health care due to wait times in general were mentioned twice; one patient noted that, while it was easy for him to find a health care provider, wait times were very long. Three patients noted that they were either waiting on Social Security benefits to arrive, or depended on social security benefits as their source of income; of these patients, one said that he was saving up income from his Social Security benefits so that he could find his own place to live before looking for a job; another said that he was saving his Social Security income for retirement. Another patient had recently moved to Texas, and was waiting on his Texas Medicaid card to arrive. One patient mentioned that although he had a caseworker, it was difficult to see the caseworker due to limited appointment hours which conflicted with his job as a day-laborer.

Poor living conditions associated with homelessness were mentioned three times. One patient noted that, while living at a shelter, he faced exposure to second-hand smoke and food poisoning; meanwhile, the same patient noted that conditions on the street were bad too, as there

were drug problems outside. Another patient noted his observation that, when people living on the street fall ill, they have difficulty in making it to a clinic, which leads bystanders to call 911. A third patient said that he was once transported to the ED by an ambulance after sleeping outside during a storm.

EMS usage was mentioned five times, with reasons for usage including exposure, work injuries, breathing problems (which contributed to one patient's reportedly frequent ED usage), and lack of transportation to clinics. One patient said that he had been injured at work, and then fired because of his injury; though he later discovered that this was not legal. In addition, lack of transportation and directions to health facilities was mentioned three times. One patient commented that, upon seeking treatment for an injury, he was referred to another health care facility twice rather than getting treated right away. According to another patient, before he was covered by Medicaid, he noticed that doctors were more inconsiderate towards him. In addition, one patient said that he appreciated the student-run free clinic, because it provides him with bulk aspirin and cough lozenges, rather than just one or two doses as other health care facilities do.

Two patients noted that they had completed a Coordinated Assessment but had never heard back; one of these patients had been waiting for six months. Another patient said that after completing a Coordinated Assessment, she was assigned to a psychiatric nursing home which she did not want to go to due to poor treatment she had received at a mental health facility in the past. Shelters and transitional living facilities were mentioned five times: two patients noted that the shelters they stayed at, while useful for daily living, did not offer health care resources; one patient mentioned that the ARCH helped him get a MAP card; two patients expressed discontent

towards their experiences staying at Salvation Army, with one patient noting that she was unable to bathe while staying there.

Three patients elaborated on their experience with caseworkers: one patient mentioned that her caseworkers were limited in their ability to help; another said that her caseworker was trying to get her into a psychiatric hospital against her wishes; a third said that, though his caseworker had helped him obtain a MAP card and ID, he lost both one week later.

Chapter 8. Discussion, Limitations, & Future Directions

Discussion

This study provided a glimpse into the demographics, health information, health care barriers, and resources used by this student-run free clinic's patient base. Comparing demographic and health-related information collected in this study to that of the general Austin population reveals disparities between the two populations. Furthermore, the study's findings revealed the large amount of heterogeneity existing within the clinic's patient base, 95.8 percent of whom were found to be homeless from this study; this strengthens the idea that those who are homeless come from a diverse background and should not be overgeneralized.

Demographic Information

The general Austin population, according to Austin Census Data collected in 2015, is 48.7 percent white (not Hispanic or Latino), 35.1 percent Hispanic or Latino, 8.1 percent black, and 6.3 percent Asian (United States Census Bureau, 2016). In comparison, the sample of

patients surveyed in this study was 29.2 percent black, 29.2 percent Hispanic or Latino, 25 percent white, 12.5 percent mixed-race, and 4.2 percent Asian. As discussed previously, black persons nationwide are nearly four times more likely to become homeless than are white persons; the percentage of black persons surveyed for this study was 3.6 times higher than that of the general population.

The unemployment rate of Austin's population is just 4.6 percent, compared to 79.2 percent of patients surveyed who reported being unemployed (CAN Community Dashboard, 2014). This helps explain the fact that most of the people surveyed reported an average income of between $0 and $10,000 per year, which is significantly less than the average income of the general Austin population of $57,689 per year (United States Census Bureau, 2016). Thirty-two percent of surveyed patients who were unemployed reported that they were looking for work; 26.3 percent reported that they were unemployed because of a medical reason or disability.

The fact that over a quarter of all patients who were unemployed reported that they were unable to work due to a medical reason or disability reflects the relationship between homelessness and health status. Whereas about 16 percent of the non-institutionalized United States population is disabled, 40 percent of homeless individuals in the United States have disabilities (National Health Care for the Homeless Council, 2011a). Homelessness, unemployment, and disability are often intertwined, as someone with a disability who is unable to work is less likely to have access to health insurance. Moreover, homeless individuals tend to have trouble demonstrating their disabilities in order to gain disability benefits; this is because the medical records and other documents required for someone to claim disability are often

difficult for a homeless individual to retain. These records may be dispersed amongst various clinics and EDs, subject to theft or ruined by weather.

Data collected on the educational background of those surveyed reveals some of the heterogeneity that exists within the homeless population. While 33.3 percent of the subjects surveyed never completed high school, 20.8 percent held a bachelor's degree or higher. This helps to illustrate the diversity in backgrounds that exists among homeless individuals, and dispels the myth that the homeless are characteristically uneducated.

Health-Related Information

Twenty percent of the general population is uninsured, in comparison to the 29.2 percent of those surveyed in the study (United States Census Bureau, 2016). However, this 29.2 percent does not include patients who have MAP, which is not considered a true health insurance plan as it does not meet the individual shared responsibility provision mandated by the ACA (Medical Access Program, 2017a). By discounting MAP as a form of insurance, this means that 79.2 percent of the surveyed patients were uninsured. The mean extent to which lack of insurance prevented patients from seeking or receiving medical care was 1.1 out of 3 (between "to a low extent" and "to a moderate" extent").

On average, patients rated their ability to access health care as "moderately easy" overall, with a mean rating of 2.9 out of 4. Knowledge of the student-run free clinic where they were seeking health care at the time of the study may have positively impacted ability to access health care. In addition, the fact that this study's subjects were currently seeking care at the student-run free clinic may have affected their rating of quality of health care (which was on average 3.6 out

of 4), as it is possible that these patients may have been hesitant to respond negatively, or were more proactive in seeking health care compared to other homeless individuals. In order to be able to generalize the results of this study to all homeless individuals in Austin, the study would have to expand to encompass individuals in a range of shelters, transitional living facilities, and living outdoors.

Some of the patients described specific difficulties in accessing health care that they have faced, such as long wait times, limited access to specialists, and lack of dental coverage. Therefore, in future studies, it might be helpful to break down questions about ease of health care access into different specialties, to be able to assess whether one health care specialty is more difficult to access than others for these patients.

Patient perceived health status, which had a mean rating of 3.2 out of 5 overall, was generally high, with most patients responding that their perceived health status was "good" and only three patients responding that their health status was "poor." However, this measure of health status was subjective, and could vary based on different perceptions of health status. Therefore, a more objective means of assessing health status would have been to assess for a history of various illnesses and health indicators such as history of diabetes, tuberculosis, cancer, mental illness, and substance abuse. This would also allow for a comparison of health status to the general Austin population, for which these objective indicators of health status exist.

Barriers to Health Care

Lack of transportation was rated as the highest barrier to health care in this study, followed by cost of health care and nervousness about filling out forms. As patients noted, lack

of transportation to and from health care facilities contributes towards EMS usage. Furthermore, the top three most frequent ED users in the study all rated "lack of transportation" as a high barrier to health care. This suggests that increasing availability of transportation resources might be able to help facilitate these patients' access primary care, rather than them having to turn to ambulatory transport. The Transit Pass Program is one resource available in Austin that offers free and deeply-discounted transit passes to non-profit organizations in Central Texas who serve low-income clients (Transit Empowerment Fund, 2017). Unfortunately, applications for the Transit Pass Program are closed until January 2018. However, it might benefit the free clinic that was the site of this study to consider applying for such a program, which could potentially enhance the ability of its social service desk to effectively respond to patient needs.

The second highest barrier to health care in the study was cost of health care. As one patient noted, even with MAP coverage, copays are often unaffordable. This high cost of health care might also contribute to high ED usage amongst some patients, as EDs are required to treat all patients regardless of ability to pay until the point of stability. The third highest barrier to health care was nervousness about filling out forms, such as medical forms at the doctor's office or paperwork. Some of this nervousness may be accounted for by paperwork in which patients must disclose housing status or insurance status; one patient noted that he felt he was treated more poorly by health professionals before he obtained Medicaid compared to his experiences after obtaining Medicaid coverage. Given this, past experiences with or fear of discrimination and stigmatization based on housing and insurance status may play a role in preventing homeless individuals from seeking out the health care they need; even in a setting in which a patient does not have to disclose their housing status or insurance status, the lack of knowledge about a

patient's circumstances may lead to treatment plans that are difficult to follow for low-income or homeless patients (Bloch, Rozmovits, & Giambrone, 2011). Therefore, it is important that doctors, nurses, and other health professionals are trained to exhibit respect and to administer high quality care to all patients, regardless of housing or insurance status, to help these individuals overcome fear of stigmatization in a health care setting (Hill, 2010).

Resource Utilization and Ratings

The most utilized resource in this study was Coordinated Assessment (21/24), followed by shelters (20/24) and caseworkers (19/24). Though Coordinated Assessment was most utilized, there was some confusion in rating helpfulness of this resource in the context of this survey; though the question itself ("How helpful have the following resources been in helping you gain access to health care?") implied that this resource was meant to help patients access health care, Coordinated Assessment does not directly aid in health care access and instead serves as an application that assesses eligibility of individuals to receive supportive housing.

Shelters and transitional living facilities were one of the most utilized resources yet received the second poorest rating out of the eight resources in the survey (2.4/4). Some patients indicated that the shelters they have stayed at have simply served as a place to stay, and did not offer help in connecting them to health care resources. The ARCH, which had been used by ten patients, was rated well overall, with seven out of ten patients who stayed at the ARCH rating it as either "helpful" or "very helpful" in helping them access health care. However, one patient noted that while he ranked the resource as "helpful" in helping him accessing health care, he was also dissatisfied with the shelter due to secondhand smoke and past experiences with food

poisoning there. Another individual noted that while he had stayed at the ARCH in the past, he now prefers to sleep outside of a church under a covered area. Meanwhile, five out of the six patients who had stayed at the Salvation Army rated it as "not helpful" or "somewhat helpful." One patient noted that the Salvation Army was useful for daily living but not for health care; another expressed her dissatisfaction with the Salvation Army because she was unable to bathe there. Patient descriptions of shelter conditions help to reveal some of the health risks associated with being homeless; for individuals with respiratory problems, their health problems may become exacerbated by secondhand smoke at shelters. Therefore, conditions such as these might deter some individuals from staying at shelters, leaving outdoor places not meant for habitation as their only other option.

MAP was a highly-utilized program amongst study participants, with 17 out of 24 patients reporting its usage. While MAP functions as a sort of health insurance, it does have limitations in comparison to true insurance such as Medicaid. For instance, there are co-payments of up to $20 for prescription medications under MAP (Central Health, 2016b); for those covered by Medicaid whose incomes are up to 150% of the federal poverty limit, Medicaid covers the cost of most prescription drugs, though each state is able to choose which prescriptions are covered ("Does Medicaid Cover the Costs of Prescription Drugs?," n.d.). Furthermore, MAP does not cover mental health services or substance abuse treatment, which is in high need amongst Austin's homeless individuals (Central Health, 2016b). However, for the individuals interviewed in this study, MAP was likely the most accessible resource in terms of health care coverage, as MAP is available to any low-income Travis County resident provided that they are not eligible for or covered by Medicare, Medicaid, or private insurance;

furthermore, signing up is relatively easy, as applicants are not required to provide any sort of paperwork, except for some sort of photo ID if possible ("Do I Qualify?," 2017).

Caseworkers, were highly utilized and rated as "helpful" overall, are limited in their ability to facilitate health care access, according to one patient. Another patient noted that while his caseworker helped him gain a MAP card and identification, he lost both. A third patient expressed that, while he has a caseworker, he has seldom been able to see her because her appointment times conflict with his work schedule. In addition to the limitations in case management described by these three patients, caseworkers themselves often encounter difficulties in contacting and checking in with their homeless clients; the ability to keep track of homeless clients is especially important if a client has a health condition that requires frequent monitoring and adherence to medication (Kidder, Wolitski, Campsmith, & Nakamura, 2007). Technologies such as cell phone apps and GPS tracking are potential solutions that could help facilitate case management of homeless individuals; such solutions would not only help case managers themselves, but might also help establish a continuum of care for the client (Asgary et al., 2015). However, as little research has yet been done on this case management tool, it is uncertain of how effective it would be, and how receptive homeless individuals might be towards GPS tracking considering the level of distrust that already exists amongst many homeless individuals towards the health care system.

Only one patient reported ever having used the PATH/ACCESS Program, and many patients had never even heard of the program. The PATH/ACCESS Program, which is a federally-funded program that actively provides medical and psychiatric outreach services to homeless individuals with severe mental illness, simply might not have been applicable to many

of the individuals who were surveyed. However, as we did not assess for mental illness during the interviews, it is possible that some of the individuals in the study did suffer from severe mental illness, and that they had never heard of the PATH/ACCESS Program. In the latter case, underutilization of the resource might suggest that the PATH/ACCESS Program could improve its advertisement so that more individuals become aware of it.

Finally, just 8 of the individuals interviewed reported using Medicaid. This reflects the strict requirements for eligibility for Medicaid coverage in Texas, under which childless adults (who are under age 65 and without a disability) are not eligible for coverage ("Medicaid and CHIP," n.d.); this might mean that many of the individuals surveyed who were not covered by Medicaid and simply may have not been eligible. However, in states that have expanded Medicaid, any individual who earns up to 138 percent of the federal poverty level (with the federal poverty level as $12,060 for an individual with no additional family members) is eligible for Medicaid (Kaiser Family Foundation, 2013); (Obamacare Facts, 2017a). This means that, had Texas expanded Medicaid, all 15 of the survey respondents whose incomes were less than $10,000 a year would have been eligible for Medicaid.

Limitations and Future Directions

This study had several limitations. Because the sample size was relatively low (n = 24), only descriptive statistics were generated in this study. In order to perform a more in-depth analysis of the data, including correlational analyses between various health care barriers and health status as well as testing statistical significance of between-group differences, a larger

sample size is needed. Therefore, data collection will be continued into the summer of 2017, until a sample size of at least 50 is obtained.

Another limitation of this study is that we only conducted interviews with patients at a student-run free clinic. As discussed, these patients may not be representative of all homeless individuals in Austin, and the fact that they have already sought care at the clinic might positively impact their ratings of quality of health care or ease of accessing health care. In future studies, we would like to examine patients from a range of environments, potentially starting with Austin's two major homeless shelters, ARCH and the Salvation Army. It would also be beneficial to conduct this survey with patients at one of Austin's three patient-centered medical homes to compare health status and other measurements between the patient base at this student-run free clinic and at a more extensive, integrated health care setting.

Furthermore, the way in which we measured health status in this study was very subjective, as we only evaluated patient-perceived health status and did not inquire about any objective health indicators. In future studies, we would like to incorporate objective measures of health status into the survey, such as history of heart disease, tuberculosis, HIV/AIDS, and potentially mental illness and substance use.

Although not a study limitation, the results of the health care barriers section of the study suggest a direction for future inquiry regarding the examination of transportation resources available in Austin. This includes Austin's Transit Pass Program, which offers free and greatly reduced cost bus passes to non-profit organizations serving low-income populations. Therefore,

it might be beneficial for the student-run free clinic to apply to become a 501c3 non-profit organization, so that it can become eligible for the Transit Pass Program.

PART IV. POTENTIAL SOLUTIONS AND IMPLICATIONS FOR THE FUTURE OF HEALTH CARE ACCESS FOR HOMELESS INDIVIDUALS

Chapter 9. Potential Solutions to Overcoming Barriers to Health Care Access in Homeless Individuals

This section examines potential solutions to overcoming barriers to accessing health care for homeless individuals and families that have demonstrated past success in enhancing health outcomes and quality of life while also proving cost-effective. These solutions include a Housing First approach to ending homelessness, expanding mental health services and coverage, and streamlining the currently fragmented health and social services system to enhance the continuum of care. Finally, this section addresses possible changes that might be made under the Trump administration over the next four years, briefly discussing implications these changes might have for health care access in homeless individuals.

Housing First Approach

In major cities in Texas, including Austin and Houston, housing demand has outpaced economic growth, leading to less affordable housing. Austin, for example, experienced a 24 percent growth in GDP, yet a 34 percent appreciation in home prices between the beginning of 2011 and the end of 2014 (Carlyle, 2015). This disproportionate increase in housing prices, in combination with factors such as medical bills, mental illness, or domestic violence, results in low-income families and individuals who cannot keep up with rising costs of living being pushed onto the streets or into transitional living facilities (“Housing First: A New Approach to Ending Homelessness for Families,” n.d.). Though transitional housing plays an important role in

helping get families and individuals off of the street, these facilities have come to serve as a long-term waiting area for permanent housing. This results in a backlog in which those who would derive the most benefit from a transitional housing program (i.e., those fleeing domestic violence or coping with a substance abuse problem) are turned away while others, whose major barrier to housing is affordability, take up needed space ("Housing First: A New Approach to Ending Homelessness for Families," n.d.).

To address the backlog that occurs in transitional living facilities, many communities throughout the nation have begun implementing a Housing First approach to ending homelessness. Housing First is a framework that focuses on getting those who are literally homeless off of the streets and out of crowded shelters into stable, permanent housing as quickly as possible regardless of housing readiness prerequisites, built on the belief that stable housing is the foundation for achieving health and social services goals. After housing is provided, the formerly homeless individual or family is then connected with needed services and long-term support in order to prevent a recurrence of homelessness ("Housing First: A New Approach to Ending Homelessness for Families," n.d.).

Evidence has shown that the Housing First approach not only reduces rates of homelessness, but also drastically lowers public costs of homelessness that result from high usage of psychiatric hospitals, EDs, jails, and transitional living facilities. For example, the Seattle Housing First program, which targeted homeless persons with severe alcohol abuse problems, reduced costs from $4,066 per person per month prior to housing to just $958 per person per month twelve months after housing. Collectively, this amounted to a cost reduction of over $4 million for the 95 individuals in the study (Larimer et al., 2009).

In the spring of 2018, ATCIC plans on opening the Housing First Oak Springs complex, which will be the first of its kind in Travis County. The complex will consist of 50 fully furnished efficiency apartments, a community room, a clinic, and integrated mental health services. Housing units will be available to individuals experiencing homelessness and have a diagnosis of mental illness, who will be screened using coordinated assessment and the Vulnerability Index-Service Prioritization and Decision Assistance Tool. ATCIC estimates that this initiative, which will house 50 of the most vulnerable members of the Austin community, will save at least $1 million per year as a result of reduced utilization of services such as EMS transport and hospital stays ("Housing First Oak Springs Facts and FAQs," n.d.).

The evidence-based success of Housing First initiatives across the nation illustrate that providing stable housing is an effective, cost-saving approach to eliminating homelessness and reducing health problems of homeless individuals. In Austin's new Housing First complex, individuals will not only have a safe, stable place to live, but will also have access to primary care via the clinic; the integrated care provided at the clinic is likely to play an important role in preventing overuse of emergency services by providing both primary and behavioral health care to some of the community's most vulnerable individuals ("Does Medicaid Cover the Costs of Prescription Drugs?," n.d.).

Expanding Mental Health Services

Mental illness both results from and precipitates homelessness. Therefore, mental health services must be made more accessible for homeless individuals. In a 2008 survey of 25 United States cities, mental illness was the third largest cause of homelessness for single adults (United

States Conference of Mayors, 2008). In Austin's homeless population, mental illness and substance abuse is prevalent, with 45 percent of homeless individuals reporting a mental health problem and 60 percent reporting having had a substance or alcohol use problem sometime in the past (ECHO, 2016). Though half of the patients that were part of the case study were covered by MAP, this program does not cover mental health services or substance use treatment (Central Health, 2016b). A customer service representative from Central Health indicated that MAP sometimes covers mental health or substance use treatment in cases in which a primary care physician within the MAP network refers an individual to these services. However, the customer service representative also noted that wait times for getting into mental health specialty treatment can be very long (MAP Customer Service Representative, personal communication, April 28, 2017). Given the prevalence of mental health issues and substance use problems in Austin's homeless, expanding MAP to cover mental health services may significantly help homeless individuals address these health problems.

Strengthening the Continuum of Care

The system of social services and health care services in the United States is fragmented, with patients often having to shuttle to and coordinate between several different facilities to get the care that they need. As discussed in this thesis, navigating a fragmented system of care can prove especially difficult for homeless individuals. Lack of continuity of care itself may also contribute towards homelessness; individuals who have been released from shelters, mental health institutions, or the prison system are especially vulnerable to falling into homelessness if adequate support services are not provided after discharge (Herbert *et al.*, 2015). Therefore,

strengthening the continuity of care for homeless individuals is necessary to improve accessibility and ease of navigating these resources and to break the cycle of homelessness.

Facilitating Transportation to and from Health Care Facilities

The case study conducted revealed that lack of transportation to and from health care facilities was the highest barrier to health care amongst study participants. As discussed, a potential solution to this barrier might be to improve access to transportation by, for example, expanding Austin's Transit Pass Program. Providing reduced-cost or free bus passes to homeless individuals may be a helpful first step in expanding access to care for individuals seeking care at a variety of locations. However, even with a means of physically travelling from one health facility to the next, patient care remains fragmented. For instance, a patient who seeks out primary care might for a given problem might then get referred to various specialty care physicians who may or may not be covered under that individual's insurance. Therefore, simply providing transportation to and from health care facilities may not be sufficient to facilitate ease of accessing health care in a fragmented system.

Municipal ID Programs

In addition to transportation barriers, another problem associated with fragmented care is the resulting disconnect between electronic health record (EHR) systems; this might result in a patient having to coordinate between several facilities themselves in order to consolidate health records and documents, which may be needed in order to prove a disability to attain SSDI benefits. Because of the difficulty faced by homeless individuals in keeping track of medical records, a municipal identification (ID) program might serve as an efficient, cost-effective

means of consolidating records from a range of mental health and medical facilities that might each have distinct EHRs. One successful example of a municipal ID program is that of IDNYC in New York City. IDNYC, the nation's most expansive municipal ID program, provides free ID cards to all New Yorkers regardless of immigration status, gender identity, or homelessness. The program, which serves over 830,000 New York City residents, is integrated with NYC Health and hospitals, as well as the Department of Health and Mental Hygiene. IDNYC makes it easy for all New Yorkers to access medical records, and also helps homeless individuals overcome lack of identification as a potential barrier to health care ("City Announces Additional Benefits for IDNYC Cardholders through New Integrations with NYC Health +," 2016). Programs such as IDNYC may also help homeless individuals apply for disability benefits without having to tediously keep track of medical records and insurance paperwork that may be spread out amongst several different EDs, clinics, and agencies. Given the benefits that IDNYC has for the residents of New York City, the city of Austin should consider its own municipal ID program.

Adopting the Patient-Centered Medical Home (PCMH)

Rather than facilitating transportation and record keeping between a multitude of different health care facilities, a more effective approach to strengthening continuity of care might be to adopt the patient-centered medical home (PCMH) as a model of integrated care. The PCMH serves as a model of primary care that offers patient-centered, comprehensive, team-based, accessible, high-quality health care ("Defining the Medical Home," 2017). Rather than having to rely on several different, disjointed health care facilities for care, PCMHs allow individuals to receive all of their primary care needs, including medical, mental health, case management, and pharmacy services, all in one comprehensive center. A major focus of PCMHs

is to help patients achieve self-efficacy, a goal especially pertinent to homeless patients. Austin's CommUnityCare network currently has three PCMHs: David Powell, North Central, and Rosewood Zaragosa. These health care centers all use evidence-based medicine and clinical decision support tools in order to help patients take an active role in decision making and participation in their own health care ("CommUnityCare: Patient Centered Medical Home," 2017). This individualized, comprehensive approach to care not only helps to overcome the barrier of lack of transportation, but also might also help to mitigate diagnostic errors attributed to frequent hand-offs characteristic of a fragmented health care system (Singh & Graber, 2010).

Enhancing Community Outreach and Engagement Strategies

As discussed, case managers play an important role in bridging various disconnected social services and health care resources for homeless individuals. In traditional case management, the client is connected by the case manager to services provided by multiple agencies or programs in the community, such as housing services, mental health services, or other medical services. However, homeless individuals with severe mental illness, negative past experiences with the social services system, or a limited understanding of their need for help are not well served by this traditional approach ("Fact Sheet: Assertive Community Treatment (ACT)," n.d.). Instead of traditional case management in these cases, it may be more helpful to directly provide services to homeless individuals, rather than having one case manager acting as an intermediary for clients reluctant to navigate the system on their own. One model that is designed to provide this comprehensive, direct care by meeting homeless individuals where they are, is known as Assertive Community Treatment (ACT) ("Fact Sheet: Assertive Community Treatment (ACT)," n.d.).

Unlike traditional case management programs, the ACT team is made up of multidisciplinary staff, including a housing specialist, psychiatrist, and other medical professionals, who directly deliver care and support services to clients in the community. In Austin, ATCIC provides an ACT team for individuals who have a history of multiple hospitalization treatments as well as a diagnosis of schizophrenia, schizoaffective disorder, or bipolar disorder. This ACT team primarily functions by providing mobile services, and takes on a small case load at any given time with a consumer-to-staff ratio of just ten-to-one ("Assertive Community Treatment (ACT)," 2013). If ACT can effectively target high-cost homeless users of the EMS system, then this technique has the potential to greatly reduce costs as well. CommUnityCare provides a similar service in the form of Mobile Health Teams. These teams consist of a medical provider, nurse, case manager, and a clinical pharmacist or dietician, and provide primary and preventative care to those who otherwise cannot access it; services offered include immunizations, flu shots, physicals, nutritional counseling, treating minor illnesses and chronic illnesses, and specialty care referrals ("CommUnityCare: Mobile Primary Healthcare," 2017).

Chapter 10. The New Administration: Implications for the Future of Health Care Access in Homeless Individuals

Changes that might be made under the Trump administration may impact the future of health care access in homeless individuals nationwide. These changes include the possibility of phasing down Medicaid expansion funding, reduced support for FQHCs such as HCH clinics, uncertainty over insurance subsidies, and cuts to other non-defense spending (Fessler, 2017; Kurtzleben, 2017; Rosenbaum *et al.*, 2017). Prior to the implementation of the ACA and Medicaid expansion, 30 percent of patients at HCH clinics nationwide had health insurance; after expansion, insurance coverage increased to 90 percent through either Medicaid or Medicare. This increase in insurance coverage allowed HCH to open additional clinics across the country, doubling its number of clients (Fessler, 2017). Therefore, if Medicaid expansion is phased down, it is possible that the percentage of homeless individuals who lack access to primary care will rise; as discussed in this thesis, this potential reduction of primary care access might result in a subsequent increase in ED usage amongst these individuals.

The Trump administration has proposed budget cuts to non-defense spending, including over $6 billion in cuts to the Department of Housing and Urban Development (HUD). This proposal includes $300 million in cuts to rental assistance payments, which contain funding for Section 8 housing and housing for homeless veterans (DelReal, 2017). Though it is unclear at this time whether these proposed cuts will remain in the budget that is adopted, such drastic cuts are likely to reduce availability of housing, pushing more of America's vulnerable families and individuals onto the streets and into emergency shelters.

Conclusion

Let's revisit the scenario from the introduction. A couple of months have gone by since your landlord evicted you. You've been crashing with friends and distant relatives who happen to live in your city, while trying to ration out the last few doses of corticosteroids you have remaining to manage your lupus. You tell yourself that your situation is only temporary – as soon as you're well enough to get back to work, you'll be able to start saving up for rent. Then one day, after overstaying your welcome at an old coworker's house, you discover that you have nobody left to turn to for help. You call 2-1-1, the number for social services resources, and explain your situation; as the lady on the other end of the phone begins listing out shelters in your area, the reality of your situation becomes apparent: you are homeless.

You pack a couple of sets of clothes, a toothbrush, your laptop, and your remaining meds in a backpack and trek over to the Salvation Army, only to find that the shelter is full for the night. You wander around for a while contemplating what the next step is in this situation; but it's getting dark, and the aching in your knees is getting worse, so you decide to spend just this one night on a nearby park bench.

A lot happens over the next week: your backpack gets stolen, you haven't had a chance to shower, and your lupus, left untreated, worsens. You mean to head to a free clinic, but can't seem to find the time between standing in line for the shelter each night and trying to find a bite to eat each day; regardless, you wouldn't have a way of getting there without a car or money for a bus pass. One morning you wake up to a particularly nasty flare, and find that you struggle to

get off your park bench. A jogger sees you and calls 911, and eighteen minutes later, you're back where this all started: the ED.

Nobody plans on becoming ill or losing their job, and likewise, nobody plans on becoming homeless. While poor health is just one of several different factors that can push an already vulnerable individual into homelessness, homelessness itself precipitates poor health. The barriers to health care discussed in this thesis prevent individuals from addressing their health problems, sometimes until emergency intervention becomes necessary; meanwhile, the conditions of homelessness can exacerbate an existing health condition. Homelessness, therefore, should be treated on federal, state, and local levels as a public health problem. Though long-term interventions to end homelessness may be costly, the costs of maintaining homelessness are far greater.

References

ARCH. (2013, October 18). Retrieved April 11, 2017, from http://frontsteps.org/what-we-do/arch/

Asgary, R., Sckell, B., Alcabes, A., Naderi, R., Adongo, P., & Ogedegbe, G. (2015). Perceptions, Attitudes, and Experience Regarding mHealth Among Homeless Persons in New York City Shelters. *Journal of Health Communication*, *20*(12), 1473–1480. https://doi.org/10.1080/10810730.2015.1033117

Ask & Code: Documenting Homelessness Throughout the Health Care System. (2016, October). National Health Care for the Homeless Council, Inc. Retrieved from https://www.nhchc.org/wp-content/uploads/2016/10/ask-code-policy-brief-final.pdf

Assertive Community Treatment (ACT). (2013). Retrieved April 27, 2017, from http://www.integralcare.org/content/assertive-community-treatment-act

Austin Resource Center for the Homeless - ARCH. (n.d.). Retrieved May 7, 2017, from http://www.homelessshelterdirectory.org/cgi-bin/id/shelter.cgi?shelter=7090

Austin Travis County Integral Care. (2013). Narrative | Integral Care. Retrieved April 11, 2017, from http://www.integralcare.org/content/narrative

Barragán, J. (2015, November 13). Casualties of the Streets: How Austin's Homeless are Dying. Retrieved April 19, 2017, from http://projects.statesman.com/news/homeless-deaths/

Barry, P. (2017). Medicare Donut Hole, Medicare Gap, and Medicare Part D. Retrieved April 1, 2017, from http://www.aarp.org/health/medicare-insurance/info-11-2009/part_3_the_doughnut_hole.html

Bassuk, E., Carman, R., & Weinreb, L. (1990). *Community Care for Homeless Families: A Program Design Manual*. National Institute of Mental Health. Retrieved from http://hdl.handle.net/2027/umn.31951p00978728s

Bloch, G., Rozmovits, L., & Giambrone, B. (2011). Barriers to Primary Care Responsiveness to Poverty as a Risk Factor for Health. *BMC Family Practice*, *12*, 62. https://doi.org/10.1186/1471-2296-12-62

Boden, P., & Messman, T. (2015). The Right to Rest: Homeless Coalition Challenges Criminalization of Life on the Street. *Race, Poverty & the Environment*, *20*(1), 94–97.

Burt, M. R. (2001). *Helping America's Homeless: Emergency Shelter or Affordable Housing?* The Urban Insitute.

Cadzow, R. B., Servoss, T. J., & Fox, C. H. (2007). The Health Status of Patients of a Student-Run Free Medical Clinic in Inner-City Buffalo, NY. *The Journal of the American Board of Family Medicine*, *20*(6), 572–580.

CAN Community Dashboard. (2014). *Key Socioeconomic Indicators for Greater Austin & Travis County*. Community Action Network. Retrieved from http://www.cancommunitydashboard.org/files/2014CANCommunityDashboard.pdf

Carlyle, E. (2015, June 8). America's Most Overvalued and Undervalued Housing Markets. Retrieved April 26, 2017, from http://www.forbes.com/sites/erincarlyle/2015/06/08/americas-most-overvalued-and-undervalued-housing-markets-in-2015/

Case Management Society of America. (n.d.). What is a Case Manager? Retrieved April 10, 2017, from http://www.cmsa.org/Home/CMSA/WhatisaCaseManager/tabid/224/Default.aspx

Central Health. (2016a). *Central Health 2017 - 2019 Strategic Plan*. Retrieved from http://www.centralhealth.net/wp-content/uploads/2016/10/Central-Health-2017-19-Strategic-Plan-web.pdf

Central Health. (2016b). *Medical Access Program (MAP) Handbook*. Central Health. Retrieved from http://www.medicalaccessprogram.net/wp-content/uploads/2012/07/MAP-Handbook-English-Feb-15-2016.pdf

Central Health: About Us. (2016). Retrieved February 23, 2017, from http://www.centralhealth.net/about-us/

Central Health & The University of Texas Dell Medical School. (2017). *Community Benefit Report: 2016*.

City Announces Additional Benefits for IDNYC Cardholders through New Integrations with NYC Health +. (2016, April 21). Retrieved April 27, 2017, from http://www1.nyc.gov/office-of-the-mayor/news/379-16/city-additional-benefits-idnyc-cardholders-new-integrations-nyc-health-

Committee on Health Care for Homeless People. (1988). *Homelessness, Health, and Human Needs*. National Academies Press (US). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK218232/pdf/Bookshelf_NBK218232.pdf

Community Advanced Network. (2015). "Uninsured." Retrieved from http://www.cancommunitydashboard.org/drilldowns/health-insurance.php

Community Care Texas. (n.d.). CommUnityCare : About : Federally Qualified Health Care. Retrieved February 14, 2017, from http://communitycaretx.org/about/federal.html

CommUnityCare : Locations : Austin Resource Center for the Homeless (ARCH). (n.d.). Retrieved May 7, 2017, from http://communitycaretx.org/locations/arch.html

CommUnityCare: Mobile Primary Healthcare. (2017). Retrieved April 27, 2017, from http://communitycaretx.org/programs-services/services/mobileclinic.html

CommUnityCare: Patient Centered Medical Home. (2017). Retrieved April 27, 2017, from http://communitycaretx.org/what/home.html

Congressional Budget Office. (2017, March 13). American Health Care Act. Retrieved March 16, 2017, from https://www.cbo.gov/publication/52486

Continuum of Care Program. (n.d.). Retrieved May 7, 2017, from https://portal.hud.gov/hudportal/HUD?src=/hudprograms/continuumofcare

Coordinated Assessment – ECHO. (n.d.). Retrieved May 7, 2017, from http://www.austinecho.org/the-solution/coordinated-assessment/

Cross-Call, J. (2015, April 28). Medicaid Expansion Is Producing Large Gains in Health Coverage and Saving States Money. Retrieved April 25, 2017, from http://www.cbpp.org/research/health/medicaid-expansion-is-producing-large-gains-in-health-coverage-and-saving-states

Defining the Medical Home. (2017). Retrieved April 27, 2017, from https://www.pcpcc.org/about/medical-home

DelReal, J. (2017, March 8). Trump Administration Considers $6 Billion Cut to HUD Budget. *Washington Post*. Retrieved from https://www.washingtonpost.com/politics/trump-administration-considers-6-billion-cut-to-hud-budget/2017/03/08/1757e8e8-03ab-11e7-b1e9-a05d3c21f7cf_story.html

Do I Qualify? (2017). Retrieved April 24, 2017, from http://www.medicalaccessprogram.net/do-i-qualify/

Does Medicaid Cover the Costs of Prescription Drugs? (n.d.). Retrieved April 24, 2017, from https://eligibility.com/medicaid/does-medicaid-cover-the-costs-of-prescription-drugs

ECHO. (2016). *Homelessness in Austin: Current Needs and Gaps Report*. Austin, Texas: ECHO.

ECHO. (2017). Housing First – Community Wide Definition – ECHO. Retrieved April 11, 2017, from http://www.austinecho.org/the-solution/housing-interventions/housing-first-community-wide-definition/

Erickson, S. K., Rosenheck, R. A., Trestman, R. L., Ford, J. D., & Desai, R. A. (2008). Risk of Incarceration Between Cohorts of Veterans With and Without Mental Illness Discharged from Inpatient Units. *Psychiatric Services (Washington, D.C.)*, *59*(2), 178–183. https://doi.org/10.1176/ps.2008.59.2.178

Fact Sheet: Assertive Community Treatment (ACT). (n.d.). National Alliance on Mental Illness - Minnesota. Retrieved from http://www.namihelps.org/assets/PDFs/fact-sheets/General/Assertive-Community-Treatment.pdf

Fazel, S., Geddes, J. R., & Kushel, M. (2014). The Health of Homeless People in High-Income Countries: Descriptive Epidemiology, Health Consequences, and Clinical and Policy Recommendations. *Lancet (London, England)*, *384*(9953), 1529–1540. https://doi.org/10.1016/S0140-6736(14)61132-6

Fessler, P. (2017, February 7). Obamacare Helped the Homeless, Who Now Worry About Coverage Repeal. Retrieved April 11, 2017, from http://www.npr.org/sections/health-shots/2017/02/07/513255784/obamacare-helped-the-homeless-who-now-worry-about-coverage-repeal

Folsom, D. P., Hawthorne, W., Lindamer, L., Gilmer, T., Bailey, A., Golshan, S., … Jeste, D. V. (2005). Prevalence and Risk Factors for Homelessness and Utilization of Mental Health

Services Among 10,340 Patients with Serious Mental Illness in a Large Public Mental Health System. *American Journal of Psychiatry*, *162*(2), 370–376. https://doi.org/10.1176/appi.ajp.162.2.370

Foster, A., Gable, J., & Buckley, J. (2012). Homelessness in Schizophrenia. *Psychiatric Clinics of North America*, *35*(3), 717–734. https://doi.org/10.1016/j.psc.2012.06.010

Fox, A. M., Mulvey, P., Katz, C. M., & Shafer, M. S. (2016). Untangling the Relationship Between Mental Health and Homelessness Among a Sample of Arrestees. *Crime & Delinquency*, *62*(5), 592–613. https://doi.org/10.1177/0011128713511571

FQHC Associates. (2016). What is a Federally Qualified Health Center (FQHC)? Retrieved February 24, 2017, from http://www.fqhc.org/what-is-an-fqhc/

Frequently Asked Questions about Health Care for the Homeless. (2011, April). National Health Care for the Homeless Council, Inc. Retrieved from https://bphc.hrsa.gov/technicalassistance/taresources/hchfaq2011.pdf

Fuller Torrey, E., Zdanowicz, M., Kennard, A. D., Lamb, R., Eslinger, D., Biasotti, M. C., & Fuller, D. A. (2014). *The Treatment of Persons with Mental Illness in Prisons and Jails: A State Survey*. Treatment Advocacy Center. Retrieved from http://www.treatmentadvocacycenter.org/storage/documents/treatment-behind-bars/treatment-behind-bars.pdf

Green Doors. (n.d.). The Costs of Homelessness | Green Doors. Retrieved April 10, 2017, from http://www.greendoors.org/facts/cost.php

Gusmano, M. K. (2012). Undocumented Immigrants in the United States: U.S. Health Policy and Access to Care. Retrieved from http://www.undocumentedpatients.org/issuebrief/health-policy-and-access-to-care/

Hackney, D. D., Friesner, D., & Johnson, E. H. (2016). What is the Actual Prevalence of Medical Bankruptcies? *International Journal of Social Economics*, *43*(12), 1284.

Hall, M. (2016). *Health Care Safety Net Resources by State*. Retrieved from http://www.rwjf.org/en/library/research/2012/02/health-care-safety-net-resources-by-state.html

Hallett, R. (2013, July). *Effectively Serving Chronically Homeless Veterans*.

Hancock, J. (2017, April 10). Republicans Now Control Obamacare. Will Your Coverage Change? Retrieved April 11, 2017, from http://www.npr.org/sections/health-shots/2017/04/10/523020561/republicans-now-control-obamacare-will-your-coverage-change

Hayashi, S. (2016, January 25). How Health and Homelessness are Connected—Medically. *The Atlantic*. Retrieved from https://www.theatlantic.com/politics/archive/2016/01/how-health-and-homelessness-are-connectedmedically/458871/

Health Insurance Resource Center. (2017, January 1). Texas and the ACA's Medicaid Expansion: Eligibility, Enrollment and Benefits. Retrieved April 1, 2017, from https://www.healthinsurance.org/texas-medicaid/

Henry, M., Watt, R., Rosenthal, L., Shivji, A., Khadduri, J., & Culhane, D. P. (2016). *The 2016 Annual Homeless Assessment Report (AHAR) to Congress: Part 1, Point in Time Estimates*. Retrieved from https://works.bepress.com/dennis_culhane/208/

Herbert, C. W., Morenoff, J. D., & Harding, D. J. (2015). Homelessness and Housing Insecurity Among Former Prisoners. *The Russell Sage Foundation Journal of the Social Sciences : RSF*, *1*(2), 44–79.

Hill, T. E. (2010). How Clinicians Make (or Avoid) Moral Judgments of Patients: Implications of the Evidence for Relationships and Research. *Philosophy, Ethics, and Humanities in Medicine : PEHM*, *5*, 11. https://doi.org/10.1186/1747-5341-5-11

Hoshide, R. R. (2011). Barriers to Healthcare of Homeless Residents of Three Honolulu Shelters. *Hawai'i Medical Journal*, *70*(10), 214–216.

Housing and Urban Development. (2014). *Rapid Re-Housing Brief*.

Housing First: A New Approach to Ending Homelessness for Families. (n.d.). The National Alliance to End Homelessness, Inc. Retrieved from http://www.endhomelessness.org/page/-/files/1029_file_HsngFirstPrimer.pdf

Housing First Oak Springs Facts and FAQs. (n.d.). Integral Care.

Institute of Medicine (US) Committee on Health Care for Homeless People. (1988). *Health Care Services for Homeless People*. National Academies Press (US). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK218235/

Jenkins, D., Rabbitt, D., Meinbresse, M., & Tilley, P. (2012). *Within Reach: Perspectives of Hard-to-Reach Consumers Experiencing Homelessness: Findings from a Consumer Participation Outreach Survey*. Nashville, TN: National Health Care for the Homeless Council.

Jones, M. M. (2016). Does Race Matter in Addressing Homelessness? A Review of the Literature. *World Medical & Health Policy*, *8*(2), 139–156. https://doi.org/10.1002/wmh3.189

Kaiser Family Foundation. (2013, October 1). Medicaid Eligibility for Adults as of January 1, 2014. Retrieved April 23, 2017, from http://kff.org/medicaid/fact-sheet/medicaid-eligibility-for-adults-as-of-january-1-2014/

Kaiser Family Foundation. (2015). Health Insurance Coverage of the Total Population. Retrieved February 14, 2017, from http://kff.org/other/state-indicator/total-population/

Kidder, D., Wolitski, R., Campsmith, M., & Nakamura, G. (2007). Health status, health care use, medication use, and medication adherence among homeless and housed people living with HIV/AIDS. *Am J Public Health, 97*(12), 2238–45.

Kurtzleben, D. (2017, March 29). 6 Changes the Trump Administration Can Still Make To Obamacare. Retrieved April 28, 2017, from http://www.npr.org/sections/health-shots/2017/03/29/521713002/6-changes-the-trump-administration-can-still-make-to-obamacare

Larimer, M. E., Malone, D. K., Garner, M. D., Atkins, D. C., Burlingham, B., Lonczak, H. S., … Marlatt, G. A. (2009). Health Care and Public Service Use and Costs Before and After Provision of Housing for Chronically Homeless Persons with Severe Alcohol Problems. *JAMA, 301*(13), 1349–1357. https://doi.org/10.1001/jama.2009.414

Levinson, D. (2004). *Encyclopedia of Homelessness*. SAGE.

MAP Customer Service Representative. (2017, April 28). Phone call with MAP Customer Service.

McMurray-Avila, M., Ciambrone, S., & Edgington, S. (2009). *Medical Respite Services for Homeless People: Practical Planning*. Health Care for the Homeless: Respite Care Providers' Network. Retrieved from http://www.nhchc.org/wp-content/uploads/2011/09/FINALRespiteMonograph1.pdf

Medicaid. (2017). December 2016 Medicaid and CHIP Enrollment Data Highlights. Retrieved April 1, 2017, from https://www.medicaid.gov/medicaid/program-information/medicaid-and-chip-enrollment-data/report-highlights/index.html

Medicaid. (n.d.). Eligibility. Retrieved April 3, 2017, from https://www.medicaid.gov/medicaid/eligibility/

Medicaid and CHIP. (n.d.). Retrieved May 7, 2017, from https://hhs.texas.gov/services/health/medicaid-chip

Medical Access Program. (2017a). Medical Access Program - Home. Retrieved from http://www.medicalaccessprogram.net/

Medical Access Program. (2017b). Medical Home. Retrieved April 9, 2017, from http://www.medicalaccessprogram.net/get-care/sites-medical-home/

Medicare.net. (2017). What Is Medicare? Get Answers from Medicare Experts. Retrieved March 18, 2017, from https://medicare.net/what-is-medicare/

Moraff, C. (2014, July 23). "Housing First" Helps Keep Ex-Inmates Off the Streets (and Out of Prison). Retrieved April 17, 2017, from https://nextcity.org/daily/entry/housing-first-former-prisoners-homelessness

National Alliance to End Homelessness. (2013). The Assessment and Referral Processes: Coordinated Assessment Checklist Addendum. Retrieved April 10, 2017, from http://www.endhomelessness.org/library/entry/the-assessment-and-referral-process-coordinated-assessment-checklist-addend

National Coalition for the Homeless. (n.d.). A Dream Denied: The Criminalization of Homelessness in U.S. Cities. Retrieved April 17, 2017, from http://www.nationalhomeless.org/publications/crimreport/constitutional.html

National Health Care for the Homeless Council. (2011a). *Disability, Employment, & Homelessness: 2011 Policy Statement*. Nashville, TN: National Health Care for the

Homeless Council. Retrieved from http://www.nhchc.org/wp-content/uploads/2011/09/disability2011_-final.pdf

National Health Care for the Homeless Council. (2011b). *Homelessness & Health: What's the Connection?*

National Institute of Mental Health (NIMH). (2015, July 9). Retrieved April 17, 2017, from https://www.nih.gov/about-nih/what-we-do/nih-almanac/national-institute-mental-health-nimh

National Low Income Housing Coalition. (2015, April 13). Homeless Rates Decreasing Nationally, But Not For All States. Retrieved February 14, 2017, from http://nlihc.org/article/homeless-rates-decreasing-nationally-not-all-states

North Texas Regional Extension Center. (2015). *The Physician Workforce in Texas* (p. 3).

Obamacare Facts. (2017a). 2016 - 2017 Federal Poverty Guidelines. Retrieved April 23, 2017, from http://obamacarefacts.com/2016-2017-federal-poverty-guidelines/

Obamacare Facts. (2017b). ObamaCare and Immigrants. Retrieved from http://obamacarefacts.com/obamacare-immigrants/

Olivet, J., Bassuk, E., Elstad, E., Kenney, R., & Jassil, L. (2010). Outreach and Engagement in Homeless Services: A Review of the Literature. *The Open Health Services and Policy Journal*, *3*, 53–70.

Pollitz, K., Cox, C., Lucia, K., & Keith, K. (2014, January 7). Medical Debt among People With Health Insurance – Consequences of Medical Debt. Retrieved February 28, 2017, from http://kff.org/report-section/medical-debt-among-people-with-health-insurance-consequences-of-medical-debt/

Polsky, D., Richards, M., Basseyn, S., Wissoker, D., Kenney, G. M., Zuckerman, S., & Rhodes, K. V. (2015). Appointment Availability after Increases in Medicaid Payments for Primary Care. *New England Journal of Medicine*, *372*(6), 537–545. https://doi.org/10.1056/NEJMsa1413299

RAND. (1990, November 13). Homelessness Survey from RAND Health | RAND. Retrieved April 11, 2017, from https://www.rand.org/health/surveys_tools/homelessness.html

Reichman, N., Teitler, J. O., Garfinkel, I., & McLanahan, S. S. (2001). *The Fragile Families and Child Wellbeing Study (Survey of New Parents)*.

Renter, E. (2015). *You've Got Medicaid – Why Can't You See the Doctor?* Retrieved from http://health.usnews.com/health-news/health-insurance/articles/2015/05/26/youve-got-medicaid-why-cant-you-see-the-doctor

Rosenbaum, S., Rothenberg, S., Gunsalus, R., & Schmucker, S. (2017). *Medicaid's Future: What Might ACA Repeal Mean?* Commonwealth Fund. Retrieved from http://www.commonwealthfund.org/publications/issue-briefs/2017/jan/medicaids-future-aca-repeal

Roser, M. A. (2015, March 21). Some Needy patients in Travis County Wait a Year to see a Doctor. Retrieved April 9, 2017, from http://www.mystatesman.com/news/some-needy-patients-travis-county-wait-year-see-doctor/30mPan8ehx0uzianqOjRsI/

Salvation Army Austin. (2017). Housing and Emergency Shelter. Retrieved April 11, 2017, from http://salvationarmyaustin.org/housing/#toggle-id-2

Sells, D., & Barber, C. (2013). Homelessness and Mental Illness. *Mental Health Care Issues in America: An Encyclopedia*, *1*, 322–329.

Singh, H., & Graber, M. (2010). Reducing Diagnostic Error through Medical Home-Based Primary Care Reform. *JAMA : The Journal of the American Medical Association*, *304*(4), 463–464. https://doi.org/10.1001/jama.2010.1035

Sommers, B. D. (2016). *Medicaid Expansion in Texas: What's at Stake?* The Commonwealth Fund. Retrieved from http://www.commonwealthfund.org/publications/issue-briefs/2016/apr/medicaid-expansion-texas

Substance Abuse and Mental Health Services Administration. (2016, January 25). PATH [Text]. Retrieved April 11, 2017, from https://www.samhsa.gov/homelessness-programs-resources/grant-programs-services/path

Texas Department of State Health Services. (2014, April 17). PATH, Projects for Assistance in Transition from Homelessness. Retrieved April 11, 2017, from https://www.dshs.texas.gov/mhprograms/path.shtm

The Vulnerability Index - Service Prioritization Decision Assistance Tool (VI-SPDAT). (2014, July). Community Solutions. Retrieved from http://www.orgcode.com/wordpress/wp-content/uploads/2014/08/VI-SPDAT-Manual-2014-v1.pdf

Transit Empowerment Fund. (2017). Transit Pass Program. Retrieved April 22, 2017, from http://www.transitempowermentfund.org/projects/transit-pass-program/

Turner, M. A., Santos, R., Levy, D. K., Wissoker, D., Aranda, C., & Pitingolo, R. (2012). *Housing Discrimination Against Racial and Ethnic Minorities* (2012 Executive Summary). Washington, DC: United States Department of Housing and Urban Development. Retrieved from http://www.huduser.gov/portal/Publications/pdf/HUD-514_HDS2012_execsumm.pdf

United States Census Bureau. (2016). Quick Facts: Austin City, Texas. Retrieved April 20, 2017, from //www.census.gov/quickfacts/table/LND110210/4805000

United States Conference of Mayors. (2008). *Hunger and Homelessness Survey: A Status Report on Hunger and Homelessness in America's Cities.* Retrieved from http://www.usmayors.org/uscm/home.asp.

U.S. Department of Veterans Affairs. (2016, March). VA Programs for Homeless Veterans: Fact Sheet. Office of Public Affairs.

Veterans Health Administration. (2017). About VHA - Veterans Health Administration [General Information]. Retrieved April 3, 2017, from https://www.va.gov/health/aboutvha.asp

Walters, E. (2016, September 13). Key Texas Lawmakers Show Little Appetite for Medicaid Expansion. *The Texas Tribune*. Retrieved from https://www.texastribune.org/2016/09/13/key-texas-lawmakers-show-little-appetite-medicaid-/

Warfield, M., & Artiga, S. (2016, March 15). How has the ACA Medicaid Expansion Affected Providers Serving the Homeless Population: Analysis of Coverage, Revenues, and Costs. Retrieved April 25, 2017, from http://kff.org/medicaid/issue-brief/how-has-the-aca-medicaid-expansion-affected-providers-serving-the-homeless-population-analysis-of-coverage-revenues-and-costs/

Weidaw, K. (2017, February 8). Travis Co. Jail Becomes Largest Provider of Mental Health Help after Hospital Overcrowding. Retrieved April 25, 2017, from http://kxan.com/2017/02/08/lawmakers-propose-1-billion-to-fix-state-hospitals/

What Led to the Rise of Homelessness in the 1980s. (2017, February 22). Retrieved April 17, 2017, from https://www.kcet.org/shows/socal-connected/the-rise-of-homelessness-in-the-1980s

Zlotnick, C., & Zerger, S. (2009). Survey Findings on Characteristics and Health Status of Clients Treated by the Federally Funded (US) Health Care for the Homeless Programs. *Health & Social Care in the Community*, *17*(1), 18–26. https://doi.org/10.1111/j.1365-2524.2008.00793.x

APPENDIX.

Healthcare Barriers Survey

(Prior to survey, provide description of research/survey, and ask consent)

Survey Eligibility Questions

1. Are you eighteen years old or older?

☐ Yes ☐ No

2. Have you ever completed this survey before?

☐ Yes ☐ No

Demographic Information

3. What is your gender?

☐ Male ☐ Female ☐ Transgender ☐ Other: _____

4. What is your age? _____

5. What race/ethnicity category do you identify most closely with?

☐ Native American ☐ Asian/Pacific Islander ☐ Hispanic or Latino
☐ Black or African American ☐ White ☐ Other

6. What is your marital status?

☐ Married or domestic partnership ☐ Single, never married

☐ Widowed ☐ Divorced ☐ Separated

7. Do you have children?

☐ Yes ☐ No

If yes, how many? _____

8. Paid Employment Status:

☐ Not in paid employment ☐ Part-time
☐ Full-time ☐ Self-employed

Not in Paid Employment:

☐ Looking for work ☐ Laid off
☐ Disabled or medical reason ☐ Other
☐ Student ☐ Homemaker
☐ Homemaker
☐ Retired

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9. What is your average yearly income?

- ☐ $0 - $10,000
- ☐ $10,001 - $20,000
- ☐ $20,001 - $30,000
- ☐ $30,001 - $60,000
- ☐ >$60,000

10. What is the highest level of education you have completed?

☐Elementary School (Kindergarten-5th) ☐Middle School (6th-8th) ☐Some High School

☐High School Graduate ☐GED ☐Trade/Technical/Vocational Training ☐Some College ☐College degree

11. Where have you been sleeping for most of your nights over the past 30 days?

- ☐ A house or apartment that you own or pay rent for
- ☐ A family member's or friend's house or apartment
- ☐ A hotel or motel room
- ☐ A car or truck
- ☐ Street or other outdoor place
- ☐ Transitional Living Facility (Please specify): _____
- ☐ Shelter: _____
- ☐ Other: _____

Current Means of Healthcare

12. What kind of health insurance do you have, if any?

☐ Private insurance	☐ Medicare	☐ Medicaid
☐ Medical Access Program	☐ Children's Health Insurance Program	☐ VA Health Care
☐ None	☐ Other: _____	

13. In the past six months, where have you most often gone to receive healthcare?

- ☐ Private Physician's Office
- ☐ Walk-in Clinic
- ☐ Hospital (not emergency department)
- ☐ Emergency Department
- ☐ None
- ☐ Other: _____

14. In general, how would you rate the *quality* of healthcare you currently receive?

☐ Excellent
☐ Very good
☐ Good
☐ Fair
☐ Poor
☐ No care

Hospital and Emergency Department Usage

15. Within the past six months, have you been hospitalized?

☐ Yes ☐ No

16. Within the past six months, how many times have you visited the emergency room, if at all? _____

17. Within the past six months, have you been to the emergency room to receive care for something that was not a medical emergency?

☐ Yes ☐ No

Self-Rated Health Status

18. In general, how would you say your health is?

☐ Excellent
☐ Very good
☐ Good
☐ Fair
☐ Poor

Perceived Barriers to Healthcare

19. In general, how easy is it for you to receive healthcare when you need it, currently?

☐ Very easy
☐ Moderately easy
☐ Moderately difficult
☐ Very difficult

20. Have you ever decided against seeing a health professional even though you were sick?

☐ Yes ☐ No

The following statements describe some of the barriers that some people have in receiving adequate health care. To what extent have the following factors prevented you from seeking or receiving medical care?	Not at all (0)	To a Low Extent (1)	To a Moderate Extent (2)	To a High Extent (3)
The cost of healthcare				
Lack of insurance				
Lack of transportation to and from health facilities				
Not knowing where I can get treated				
Not having necessary identification				
Not knowing where to find a health care provider that accepts my coverage				
Nervousness about filling out forms (i.e. insurance paperwork, medical forms at the doctor's office, etc.)				
Self-consciousness about my appearance				
Poor treatment at a health facility I have visited in the past				
Are there other factors not listed above that have prevented you from seeking or receiving medical care?				
Additional Factor 1: _____				
Additional Factor 2: _____				
Additional Factor 3: _____				

Resources

How helpful have the following resources been in helping you gain access to healthcare?	I have never used this resource.	I do not currently use this resource, but have used it in the past.	I am currently using this resource	Not helpful (1)	Somewhat helpful (2)	Helpful (3)	Very helpful (4)
Medical Access Program							
Medicaid							
Medicare							
Health Care for Homeless Veterans							
Case workers							
Shelters or Transitional Living Facilities Name of facility: _____							
Coordinated Assessment							
Austin Travis County Integral Care							
PATH/ACCESS							
Are there other resources not listed above that have helped you receive healthcare?							
Additional Resource 1: _____							
Additional Resource 2: _____							
Additional Resource 3: _____							

Additional Comments:

Biography

Shayan Bhathena was born and raised in Houston, Texas. She enrolled in the University of Texas at Austin and the Plan II Honors Program in the Fall of 2013. During her time at UT, Shayan majored in Plan II and Human Biology with a focus in Social Aspects of Health and Disease. In addition to her classes, she also serves as Vice President of the Plan II Pre-Medical Society, as a medic in Longhorn EMS, and as a counselor for Camp Kesem, a camp for children affected by a parent's cancer. Her interest in exploring health care access in underserved individuals stemmed from her experiences volunteering with patients at Austin State Hospital and volunteering with social services at a student-run free clinic in Austin. She will continue to pursue this interest upon graduating in May 2017 by working as a Research Assistant to Dr. Leticia Moczygemba over the next year, while applying to medical school.